78224 8-1517 200358 1119

STIC-Biotech/ChemLib

From: Seharaseyon, Jegatheesan
Sent: Thursday, August 31, 2006 2:05 PM
To: STIC-Biotech/ChemLib
Subject: Re: 10/650 365

Hi,
Please search SEQ ID NO: 2 in the commerical database.

Thanks.
Seyon
Rem 4C61
Box Rem. 4C70.

****
Searcher:_____
Searcher Phone:_____
Date Searcher Picked up:_____
Date completed:_____
Searcher Prep Time:_____
Online Time:_____

****
Type of Search
NA#_____ AA#:_____
S/L:_____ Oligomer:_____
Encode/Transl:_____
Structure #:_____Text:____
Inventor:_____ Litigation:___

****
Vendors and cost where applicable
STN:_____
DIALOG:_____
QUESTEL/ORBIT:_____
LEXIS/NEXIS:_____
SEQUENCE SYSTEM:_____
WWW/Internet:_____
Other (Specify):_____

GenCore version 5.1.9

OM protein - protein search, using sw model

Run on: September 1, 2006, 13:18:46 ; Search time 195 Seconds
(without alignments)
391.565 Million cell updates/sec

Title: US-10-650-365A-2
Perfect score: 861
Sequence: 1 MCDLPQTHSLGNRRALILLA.....EIMRSFSLSTNLQERLRRKE 167

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 2589679 seqs, 457216429 residues

Total number of hits satisfying chosen parameters: 2589679

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : A_Geneseq_8:*
1: geneseqp1980s:*
2: geneseqp1990s:*
3: geneseqp2000s:*
4: geneseqp2001s:*
5: geneseqp2002s:*
6: geneseqp2003as:*
7: geneseqp2003bs:*
8: geneseqp2004s:*
9: geneseqp2005s:*
10: geneseqp2006s:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	861	100.0	167	2	AAR11531	Aar11531 Consensus
2	861	100.0	167	8	ADQ87759	Adq87759 rSIFN-co.
3	861	100.0	167	8	ADR97080	Adr97080 Consensus
4	861	100.0	167	8	ADR87295	Adr87295 Consensus
5	861	100.0	167	8	ADW88678	Adw88678 Composite
6	861	100.0	167	9	ADX59031	Adx59031 Interfero
7	861	100.0	167	9	ADZ59356	Adz59356 Recombina
8	861	100.0	167	9	AEB53925	Aeb53925 Interfero
9	861	100.0	167	10	AEE61639	Aee61639 Human int
10	861	100.0	167	10	AEF91511	Aef91511 Consensus
11	861	100.0	167	10	AEF91468	Aef91468 Consensus
12	861	100.0	167	10	AEF91486	Aef91486 Consensus
13	856	99.4	166	8	ADO32386	Ado32386 Human int
14	856	99.4	166	9	AED67249	Aed67249 Human int
15	856	99.4	189	10	AEF91512	Aef91512 Infergen-
16	856	99.4	189	10	AEF91514	Aef91514 Infergen-
17	856	99.4	205	8	ADW64375	Adw64375 Human thy
18	854	99.2	167	2	AAR11532	Aar11532 Consensus
19	854	99.2	167	8	ADV69518	Adv69518 Human int
20	853	99.1	166	8	ADW96575	Adw96575 Protein s
21	853	99.1	167	8	ADV69517	Adv69517 Human int
22	853	99.1	170	8	ADV96753	Adv96753 Human alp
23	852	99.0	167	2	AAR11533	Aar11533 Consensus
24	850	98.7	166	1	AAP30684	Aap30684 Consensus
25	850	98.7	171	7	ADF47855	Adf47855 Human alp
26	849	98.6	167	8	ADV69519	Adv69519 Human int
27	847	98.4	170	8	ADV96755	Adv96755 Human alp
28	845	98.1	167	8	ADV69520	Adv69520 Human int
29	843	97.9	166	1	AAP30685	Aap30685 Consensus
30	841	97.7	166	1	AAP30686	Aap30686 Consensus
31	841	97.7	170	8	ADV96757	Adv96757 Human alp
32	839.5	97.5	165	8	ADL88898	Adl88898 Human cyt
33	839.5	97.5	165	10	AEF90856	Aef90856 Interfero
34	839	97.4	166	5	ABG68838	Abg68838 Interfero
35	831	96.5	171	7	ADF30369	Adf30369 Recombina
36	826	95.9	166	3	AAB28176	Aab28176 Human int
37	824	95.7	166	3	AAY44831	Aay44831 Hybrid in
38	810	94.1	166	4	AAG61804	Aag61804 Interfero
39	810	94.1	166	4	AAG61815	Aag61815 Interfero
40	810	94.1	166	8	ADI29643	Adi29643 Human int
41	810	94.1	166	8	ADI29632	Adi29632 Human int
42	808	93.8	166	4	AAG61818	Aag61818 Interfero
43	808	93.8	166	4	AAG61826	Aag61826 Interfero
44	808	93.8	166	4	AAG61795	Aag61795 Interfero
45	808	93.8	166	8	ADI29623	Adi29623 Human int

ALIGNMENTS

RESULT 1
AAR11531
ID AAR11531 standard; protein; 167 AA.
XX
AC AAR11531;
XX
DT 25-MAR-2003 (revised)
DT 12-JUN-1991 (first entry)
XX
DE Consensus human leucocyte interferon-alphaF #1.
XX
KW interferon; IFN; gene manufacture; anti-viral agent.
XX
OS Synthetic.
XX
PN EP422697-A.
XX
PD 17-APR-1991.
XX
PF 25-APR-1983; 90EP-00124236.
XX
PR 06-MAY-1982; 82US-00375494.
PR 15-APR-1983; 83US-00483451.
XX
PA (AMGE-) AMGEN.
XX
PI Alton NK, Peters MA, Stabinsky Y, Snitman DL;
XX
DR WPI; 1991-111234/16.
DR N-PSDB; AAQ11283.
XX
PT Mfd. structural gene - capable of directing synthesis in a host
PT microorganism of consensus human leukocyte interferon.
XX
PS Claim 3; Page 41; 44pp; English.
XX
CC This sequence corresponds to the consensus IFN-alphaF analogue [Arg22,
CC Ala76, Asp78, Glu79, Tyr86, Tyr90, Leu96, Thr156, Asn157, Leu158] IFN-
CC alphaF. It is encoded by a manufactured gene which was synthesised from
CC at least two linear subunits using a rapid and highly efficient method.
CC The protein and/or antibodies to them can be labelled for use in assays
CC and /or diagnostic test kits. The protein has antiviral activity. See
CC also AAR11532-3. (Updated on 25-MAR-2003 to correct PF field.)
XX
SQ Sequence 167 AA;

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  Query Match             100.0%;  Score 861;  DB 2;  Length 167;
  Best Local Similarity   100.0%;  Pred. No. 3.7e-78;
  Matches  167;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 MCDLPQTHSLGNRRALILLAQMRRISPFSCLKDRHDFGFPQEEFDGNQFQKAQAISVLHE 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 MCDLPQTHSLGNRRALILLAQMRRISPFSCLKDRHDFGFPQEEFDGNQFQKAQAISVLHE 60

Qy         61 MIQQTFNLFSTKDSSAAWDESLLEKFYTELYQQLNDLEACVIQEVGVEETPLMNVDSILA 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 MIQQTFNLFSTKDSSAAWDESLLEKFYTELYQQLNDLEACVIQEVGVEETPLMNVDSILA 120

Qy        121 VKKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSLSTNLQERLRRKE 167
              |||||||||||||||||||||||||||||||||||||||||||||||
Db        121 VKKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSLSTNLQERLRRKE 167
```

RESULT 2
ADQ87759
ID ADQ87759 standard; protein; 167 AA.
XX
AC ADQ87759;
XX
DT 09-SEP-2004 (first entry)
XX
DE rSIFN-co.
XX
KW recombinant super-compound interferon; rSIFN-co; viral infection; tumour;
KW hepatitis A; Hepatitis B; Hepatitis C; hepatitis; Epstein-Barr virus;
KW Cytomegalovirus; herpes simplex virus; herpes virus; papovavirus;
KW poxvirus; picornavirus; adenovirus; rhinovirus;
KW human T cell leukemia virus I; human T cell leukemia virus II;
KW human T cell leukemia virus III; cancer; skin cancer; liver cancer;
KW prostate cancer; cervical cancer; Kaposi's sarcoma.
XX
OS Synthetic.
XX
PN AU2003248419-A1.
XX
PD 06-NOV-2003.
XX
PF 26-SEP-2003; 2003AU-00248419.
XX
PR 26-SEP-2003; 2003AU-00248419.
XX
PA (SICH-) SICHUAN BIOTECHNOLOGY RES CENT.
XX
PI Zhang R, Guo R, Wei G;
XX
DR WPI; 2004-376455/36.
DR N-PSDB; ADQ87758.
XX
PT Novel recombinant super-compound interferon or its functionally
PT equivalent compound with changed spatial configuration, having improved
PT efficacy, is useful for treating tumor or viral diseases e.g. Hepatitis
PT A, Hepatitis B in subject.
XX
PS Disclosure; Fig 1; 60pp; English.
XX
CC The invention relates to a recombinant super-compound interferon (rSIFN-
CC co) or a its functionally equivalent compound with changed spatial
CC configuration, having improved efficacy. rSIFN-co is useful for treating
CC viral diseases or tumour in a subject, which involves administering rSIFN
CC -co to the subject in need, where the viral diseases is Hepatitis A,
CC Hepatitis B, Hepatitis C, other types of hepatitis, infections of viruses
CC caused by Epstein-Barr virus, Cytomegalovirus, herpes simplex viruses, or
CC other herpes viruses, papovaviruses, poxviruses, picornaviruses,
CC adenoviruses, rhinoviruses, human T cell leukemia viruses I, or human T
CC cell leukemia viruses II or human T cell leukemia virus III. rSIFN-co is
CC useful for treating cancer such as skin cancer, liver cancer, prostate
CC cancer, cervical cancer, Kaposi's sarcoma. rSIFN-co has improved anti-
CC viral or anti-tumour activity. The present sequence represents the amino
CC acid sequence of rSIFN-co.
XX
SQ Sequence 167 AA;

```
  Query Match             100.0%;  Score 861;  DB 8;  Length 167;
  Best Local Similarity   100.0%;  Pred. No. 3.7e-78;
  Matches  167;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 MCDLPQTHSLGNRRALILLAQMRRISPFSCLKDRHDFGFPQEEFDGNQFQKAQAISVLHE 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 MCDLPQTHSLGNRRALILLAQMRRISPFSCLKDRHDFGFPQEEFDGNQFQKAQAISVLHE 60

Qy         61 MIQQTFNLFSTKDSSAAWDESLLEKFYTELYQQLNDLEACVIQEVGVEETPLMNVDSILA 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 MIQQTFNLFSTKDSSAAWDESLLEKFYTELYQQLNDLEACVIQEVGVEETPLMNVDSILA 120

Qy        121 VKKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSLSTNLQERLRRKE 167
              |||||||||||||||||||||||||||||||||||||||||||||||
Db        121 VKKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSLSTNLQERLRRKE 167
```

RESULT 3
ADR97080
ID ADR97080 standard; protein; 167 AA.
XX
AC ADR97080;
XX
DT 02-DEC-2004 (first entry)
XX
DE Consensus interferon-alpha for treating hepatitis C virus infection.
XX
KW virucide; hepatitis C virus; infection; interferon-alpha; IFN-alpha;
KW consensus interferon-alpha; CIFN.
XX
OS Unidentified.
XX
PN WO2004078127-A2.
XX
PD 16-SEP-2004.
XX
PF 26-FEB-2004; 2004WO-US006218.
XX
PR 28-FEB-2003; 2003US-0451349P.
XX
PA (INTE-) INTERMUNE INC.
XX
PI Blatt LM, Murphy B;
XX
DR WPI; 2004-668485/65.
XX
PT Treating hepatitis C virus infection in individual, by administering
PT interferon-alpha to individual by continuous delivery, for 6 weeks.
XX
PS Disclosure; SEQ ID NO 1; 121pp; English.
XX
CC The invention relates to a method of treating (M1) hepatitis C virus
CC infection in individual, by administering interferon (IFN)-alpha to
CC individual by an initial dosage phase (initial serum concentration
CC achieved within 12-48 hours) followed by sustained dosage phase
CC consisting of at least one sustained dosage interval (with first
CC sustained serum concentration of 80-200%, and maintained at steady state
CC for five days), and where the duration of IFN-alpha therapy is at least 6
CC weeks. (M1) is useful for treating hepatitis C virus infection in an
CC individual preferably a human. This sequence corresponds to a consensus
CC interferon-alpha protein used in the method of the invention.
XX
SQ Sequence 167 AA;

```
  Query Match             100.0%;  Score 861;  DB 8;  Length 167;
  Best Local Similarity   100.0%;  Pred. No. 3.7e-78;
  Matches  167;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 MCDLPQTHSLGNRRALILLAQMRRISPFSCLKDRHDFGFPQEEFDGNQFQKAQAISVLHE 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
```

```
Db          1 MCDLPQTHSLGNRRALILLAQMRRISPFSCLKDRHDFGFPQEEFDGNQFQKAQAISVLHE 60

Qy         61 MIQQTFNLFSTKDSSAAWDESLLEKFYTELYQQLNDLEACVIQEVGVEETPLMNVDSILA 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 MIQQTFNLFSTKDSSAAWDESLLEKFYTELYQQLNDLEACVIQEVGVEETPLMNVDSILA 120

Qy        121 VKKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSLSTNLQERLRRKE 167
              |||||||||||||||||||||||||||||||||||||||||||||||
Db        121 VKKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSLSTNLQERLRRKE 167
```

RESULT 4
ADR87295
ID ADR87295 standard; protein; 167 AA.
XX
AC ADR87295;
XX
DT 02-DEC-2004 (first entry)
XX
DE Consensus interferon IFN-alpha con1 sequence, SEQ ID 1.
XX
KW Virucide; interferon; IFN-alpha; interferon alpha-con 1;
KW polyethylene glycol; PEG; hepatitis C virus infection ; HCV infection;
KW antiviral.
XX
OS Unidentified.
XX

FH	Key	Location/Qualifiers
FT	Modified-site	32
FT		/note= "Optionally modified with a single polyethylene
FT		glycol (PEG) moiety"
FT	Modified-site	51
FT		/note= "Optionally modified with a single polyethylene
FT		glycol (PEG) moiety"
FT	Modified-site	72
FT		/note= "Optionally modified with a single polyethylene
FT		glycol (PEG) moiety"
FT	Modified-site	85
FT		/note= "Optionally modified with a single polyethylene
FT		glycol (PEG) moiety"
FT	Modified-site	122
FT		/note= "Optionally modified with a single polyethylene
FT		glycol (PEG) moiety"
FT	Modified-site	123
FT		/note= "Optionally modified with a single polyethylene
FT		glycol (PEG) moiety"
FT	Modified-site	135
FT		/note= "Optionally modified with a single polyethylene
FT		glycol (PEG) moiety"
FT	Modified-site	136
FT		/note= "Optionally modified with a single polyethylene
FT		glycol (PEG) moiety"
FT	Modified-site	166
FT		/note= "Optionally modified with a single polyethylene
FT		glycol (PEG) moiety"

XX
PN WO2004076474-A2.
XX
PD 10-SEP-2004.
XX
PF 24-FEB-2004; 2004WO-US005649.
XX
PR 26-FEB-2003; 2003US-0450587P.
XX
PA (INTE-) INTERMUNE INC.
XX
PI Van Vlasselaer P, Roberts MJ, Visor G, Charles SA;
XX
DR WPI; 2004-676930/66.
XX
PT Monopegylated consensus interferon molecule useful for treating hepatitis
PT virus infection comprises a single consensus interferon polypeptide and a
PT single polyethylene glycol moiety.
XX
PS Disclosure; Fig 1; 84pp; English.
XX
CC The present invention relates to a monopegylated consensus interferon
CC (CIFN) molecule (M1) comprising a single CIFN polypeptide e.g. interferon
CC alpha-con 1 (the present sequence) and a single polyethylene glycol (PEG)
CC moiety, where the PEG moiety is linear and 30 kD in molecular weight and
CC is directly or indirectly attached through a covalent linkage to a lysine
CC residue in the CIFN polypeptide. The lysine residue is lys32, lys51,
CC lys72, lys85, lys122, lys123, lys135, lys136 or lys166. The monopegylated
CC CIFN molecule is useful for treating hepatitis C virus (HCV) infection
CC since it has superior antiviral activity of IFN-alpha; and has desired
CC pharmacokinetic properties that will allow for a reduced frequency dosing
CC regimen with sustained high enough concentrations of the drug in blood
CC while providing for a reduction in viral load. Also the monopegylated
CC CIFN molecule shows 20-fold greater antiviral activity than PEGASYS (RTM;
CC Peg-interferon-alfa2a).
XX
SQ Sequence 167 AA;

Query Match 100.0%; Score 861; DB 8; Length 167;
Best Local Similarity 100.0%; Pred. No. 3.7e-78;
Matches 167; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```
Qy          1 MCDLPQTHSLGNRRALILLAQMRRISPFSCLKDRHDFGFPQEEFDGNQFQKAQAISVLHE 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 MCDLPQTHSLGNRRALILLAQMRRISPFSCLKDRHDFGFPQEEFDGNQFQKAQAISVLHE 60

Qy         61 MIQQTFNLFSTKDSSAAWDESLLEKFYTELYQQLNDLEACVIQEVGVEETPLMNVDSILA 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 MIQQTFNLFSTKDSSAAWDESLLEKFYTELYQQLNDLEACVIQEVGVEETPLMNVDSILA 120

Qy        121 VKKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSLSTNLQERLRRKE 167
              |||||||||||||||||||||||||||||||||||||||||||||||
Db        121 VKKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSLSTNLQERLRRKE 167
```

RESULT 5
ADW88678
ID ADW88678 standard; protein; 167 AA.
XX
AC ADW88678;
XX
DT 07-APR-2005 (first entry)
XX
DE Composite interferon protein useful for treating SARS.
XX
KW composite interferon; sars coronavirus infection; infection.
XX
OS Unidentified.
XX
PN CN1478545-A.
XX
PD 03-MAR-2004.
XX
PF 18-JUL-2003; 2003CN-00150139.
XX
PR 18-JUL-2003; 2003CN-00150139.
XX
PA (MICO-) INST MICOBIOLOGY CHINESE ACAD SCI.
XX
PI Gao G, Tang H;
XX
DR WPI; 2004-391111/37.
XX
PT Use of compound interferon in the treating of SARS disease.
XX
PS Claim 1; SEQ ID NO 1; 8pp; Chinese.
XX
CC The invention relates to the application of a composite interferon
CC protein (given as SEQ ID No:1 in the specification) for preparing
CC medicines for treating SARS. Also described are a medicine containing the
CC composite interferon and a medical carrier for treating SARS. This

```
CC   sequence represents the composite interferon protein.
XX
SQ   Sequence 167 AA;

  Query Match             100.0%;  Score 861;  DB 8;  Length 167;
  Best Local Similarity   100.0%;  Pred. No. 3.7e-78;
  Matches  167;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 MCDLPQTHSLGNRRALILLAQMRRISPFSCLKDRHDFGFPQEEFDGNQFQKAQAISVLHE 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 MCDLPQTHSLGNRRALILLAQMRRISPFSCLKDRHDFGFPQEEFDGNQFQKAQAISVLHE 60

Qy         61 MIQQTFNLFSTKDSSAAWDESLLEKFYTELYQQLNDLEACVIQEVGVEETPLMNVDSILA 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 MIQQTFNLFSTKDSSAAWDESLLEKFYTELYQQLNDLEACVIQEVGVEETPLMNVDSILA 120

Qy        121 VKKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSLSTNLQERLRRKE 167
              |||||||||||||||||||||||||||||||||||||||||||||||
Db        121 VKKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSLSTNLQERLRRKE 167


RESULT 6
ADX59031
ID   ADX59031 standard; protein; 167 AA.
XX
AC   ADX59031;
XX
DT   05-MAY-2005  (first entry)
XX
DE   Interferon-alpha consensus sequence.
XX
KW   Interferon-alpha; alphavirus infection; hepatitis C virus infection;
KW   West Nile virus infection; virucide; antiinflammatory; hepatotropic;
KW   fibrosis; liver cirrhosis.
XX
OS   Synthetic.
XX
PN   WO2005013917-A2.
XX
PD   17-FEB-2005.
XX
PF   26-FEB-2004; 2004WO-US005862.
XX
PR   28-FEB-2003; 2003US-0451316P.
XX
PA   (INTE-) INTERMUNE INC.
XX
PI   Blatt LM;
XX
DR   WPI; 2005-172940/18.
XX
PT   Treating hepatitis viral infection and alpha viral infection comprises
PT   administering interferon-alpha and pirfenidone.
XX
PS   Disclosure; SEQ ID NO 1; 109pp; English.
XX
CC   The present invention provides methods for: treating alphavirus
CC   infections; treating hepatitis C virus (HCV) infections; treating West
CC   Nile virus infection; reducing liver fibrosis; increasing liver function
CC   in an individual suffering from liver cirrhosis; reducing the incidence
CC   of complications associated with HCV and cirrhosis of the liver; and
CC   reducing viral load, or reducing the time to viral clearance, or reducing
CC   morbidity or mortality in the clinical outcome, in patients suffering
CC   from viral infection. The methods involve administering effective amounts
CC   of an interferon-alpha (IFN-alpha) and pirfenidone or its analog in
CC   combination therapy. The IFN-alpha is preferably a consensus interferon,
CC   or is selected from IFN-alpha2a, IFN-alpha2b and IFN-alpha2c. The
CC   combination therapy produces a synergistic effect, a sustained viral
CC   response, and reduces the incidence or severity of side effects
CC   ordinarily experienced in response to IFN-alpha monotherapy for treatment
CC   of alphaviral infection. The present sequence is that of consensus IFN-
CC   alpha, a non-naturally-occurring polypeptide that includes those amino
CC   acid residues that are common to all naturally-occurring human leukocyte
CC   IFN-alpha subtype sequences and which includes, at one or more positions
CC   where there is no amino acid common to all subtypes, an amino acid which
CC   predominantly occurs at that position.
XX
SQ   Sequence 167 AA;

  Query Match             100.0%;  Score 861;  DB 9;  Length 167;
  Best Local Similarity   100.0%;  Pred. No. 3.7e-78;
  Matches  167;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 MCDLPQTHSLGNRRALILLAQMRRISPFSCLKDRHDFGFPQEEFDGNQFQKAQAISVLHE 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 MCDLPQTHSLGNRRALILLAQMRRISPFSCLKDRHDFGFPQEEFDGNQFQKAQAISVLHE 60

Qy         61 MIQQTFNLFSTKDSSAAWDESLLEKFYTELYQQLNDLEACVIQEVGVEETPLMNVDSILA 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 MIQQTFNLFSTKDSSAAWDESLLEKFYTELYQQLNDLEACVIQEVGVEETPLMNVDSILA 120

Qy        121 VKKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSLSTNLQERLRRKE 167
              |||||||||||||||||||||||||||||||||||||||||||||||
Db        121 VKKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSLSTNLQERLRRKE 167


RESULT 7
ADZ59356
ID   ADZ59356 standard; protein; 167 AA.
XX
AC   ADZ59356;
XX
DT   30-JUN-2005  (first entry)
XX
DE   Recombinant super-compound interferon (rSIFN-co) protein.
XX
KW   severe acute respiratory syndrome; recombinant super-compound interferon;
KW   rSIFN-co; interferon-alpha; IFN-alpha; genetic engineering;
KW   respiratory disease; respiratory tract infection; tumor; hepatitis; cold;
KW   influenza virus infection; cough; respiratory-gen.; antiinflammatory;
KW   hepatotropic; virucide; antitussive; antibacterial; recombinant protein.
XX
OS   Homo sapiens.
OS   Synthetic.
XX
PN   WO2005034853-A2.
XX
PD   21-APR-2005.
XX
PF   26-AUG-2004; 2004WO-US028067.
XX
PR   28-AUG-2003; 2003US-0498449P.
PR   28-AUG-2003; 2003US-0498785P.
PR   28-AUG-2003; 2003US-0498923P.
PR   05-MAR-2004; 2004IN-MU000279.
PR   05-MAR-2004; 2004IN-MU000280.
XX
PA   (HUIY-) HUIYANGTECH USA INC.
XX
PI   Wei G;
XX
DR   WPI; 2005-296199/30.
DR   N-PSDB; ADZ59355.
XX
PT   Treatment of severe acute respiratory syndrome involves administering a
PT   recombinant super-compound interferon.
XX
PS   Example 1; Fig 1; 106pp; English.
XX
CC   The invention relates to a method of preventing or treating severe acute
CC   respiratory syndrome by administering a recombinant super-compound
CC   interferon (rSIFN-co) or its functional equivalent. rSIFN-co is a new
CC   interferon molecule constructed according to conservative amino acids in
CC   human interferon-alpha (IFN-alpha) subtype using genetic engineering.
CC   rSIFN-co cDNA is designed according to the codon usage of Escherichia
CC   coli to achieve high expression of rSIFN-co in E. coli. Also described
```

CC are: (i) a method of inhibiting the causative agent (preferably virus) of
CC severe acute respiratory syndrome by directly or indirectly contacting
CC the agent with super-compound interferon or its functional equivalent,
CC (ii) inhibiting severe acute respiratory syndrome virus or severe acute
CC respiratory syndrome virus-infected cells involving contacting super-
CC compound interferon with the virus or cells, (iii) a pharmaceutical
CC composition comprising the recombinant super-compound interferon capable
CC of inhibiting severe acute respiratory syndrome virus or severe acute
CC respiratory syndrome virus-infected cells and a carrier, and (iv) a
CC device to deliver the composition. The rSIFN-co is useful for preventing
CC or treating severe acute respiratory syndrome in a patient (preferably
CC human) and for inhibiting severe acute respiratory syndrome virus or
CC severe acute respiratory syndrome virus-infected cells. It is also useful
CC for treating virus-induced upper respiratory diseases, tumors, hepatitis
CC infections, cold, influenza and cough. The invention provides a method
CC for preventing or treating severe acute respiratory syndrome not only by
CC inhibiting DNA duplication of hepatitis B virus but also the secretion of
CC HBsAg and HBeAg. This sequence represents rSIFN-co protein.
XX
SQ Sequence 167 AA;

Query Match 100.0%; Score 861; DB 9; Length 167;
Best Local Similarity 100.0%; Pred. No. 3.7e-78;
Matches 167; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 MCDLPQTHSLGNRRALILLAQMRRISPFSCLKDRHDFGFPQEEFDGNQFQKAQAISVLHE 60
Db 1 MCDLPQTHSLGNRRALILLAQMRRISPFSCLKDRHDFGFPQEEFDGNQFQKAQAISVLHE 60

Qy 61 MIQQTFNLFSTKDSSAAWDESLLEKFYTELYQQLNDLEACVIQEVGVEETPLMNVDSILA 120
Db 61 MIQQTFNLFSTKDSSAAWDESLLEKFYTELYQQLNDLEACVIQEVGVEETPLMNVDSILA 120

Qy 121 VKKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSLSTNLQERLRRKE 167
Db 121 VKKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSLSTNLQERLRRKE 167

RESULT 8
AEB53925
ID AEB53925 standard; protein; 167 AA.
XX
AC AEB53925;
XX
DT 06-OCT-2005 (first entry)
XX
DE Interferon-alpha con1 protein sequence, SEQ ID NO 1.
XX
KW viral infection; virucide; interferon-alpha; IFN-alpha; cancer;
KW cytostatic; IFN-gamma receptor agonist; TNF antagonist;
KW hepatitis C virus infection; antiinflammatory; hepatotropic;
KW adenocarcinoma; chronic lymphocytic leukemia;
KW acute lymphoblastic leukemia; acute myelogenous leukemia;
KW pulmonary fibrosis; respiratory-gen.; fibrosis;
KW polycystic kidney disease; fabry disease; metabolic; liver cirrhosis;
KW scleroderma; dermatological; Alzheimers disease; neurotropic;
KW neuroprotective.
XX
OS Homo sapiens.
XX
PN WO2005067963-A1.
XX
PD 28-JUL-2005.
XX
PF 24-FEB-2004; 2004WO-US005594.
XX
PR 23-DEC-2003; 2003US-0532695P.
XX
PA (INTE-) INTERMUNE INC.
XX
PI Blatt LM, Van Vlasselaer P, Ruegg C, Hsu HH;
XX
DR WPI; 2005-563877/57.
XX
PT Treating virus infection in individual, involves administering mono
PT polyethylene glycolylated consensus interferon alpha to individual.
XX
PS Disclosure; SEQ ID NO 1; 176pp; English.
XX
CC The present invention relates to treating (M1) a virus infection in an
CC individual, by administering mono polyethylene glycol (PEG) (30 kD,
CC linear)-ylated consensus interferon-alpha (IFN-alpha). Also claimed is a
CC method of treating (M2) cancer, by administering monoPEG (30 kD, linear)-
CC ylated consensus IFN-alpha; and treating (M3) a fibrotic disease, by
CC administering a combination of monoPEG (30 kD, linear)-ylated consensus
CC IFN-alpha, and IFN-gamma in amounts that are effective in the treatment
CC or prophylaxis of the fibrotic disease in the individual.(M1) further
CC involves administering ribavirin, IFN-gamma, pirfenidone, or tumor
CC necrosis factor (TNF) antagonist. The TNF antagonist is chosen from
CC ENBREL etanercept, REMICADE infliximab, and HUMIRA adalimumab. (M3)
CC further involves administering a TNF antagonist. (M1) is useful for
CC treating hepatitis C virus infection. (M2) is useful for treating cancer
CC such as adenocarcinoma, embryonal carcinoma, testicular carcinoma,
CC osteogenic carcinoma, chronic lymphocytic leukemia, acute lymphoblastic
CC leukemia, acute myelogenous leukemia. (M3) is useful for treating a
CC fibrotic disease, such as idiopathic pulmonary fibrosis, liver fibrosis
CC or renal fibrosis. (M3) is useful for treating fibrosis disorders such as
CC intestinal lung disease, polycystic kidney disease, fabry's disease,
CC liver cirrhosis, scleroderma, Grave's opthalmopathy, Alzheimer's disease,
CC myocardial fibrosis, etc. The present sequence is interferon-alpha con1
CC protein sequence.
XX
SQ Sequence 167 AA;

Query Match 100.0%; Score 861; DB 9; Length 167;
Best Local Similarity 100.0%; Pred. No. 3.7e-78;
Matches 167; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 MCDLPQTHSLGNRRALILLAQMRRISPFSCLKDRHDFGFPQEEFDGNQFQKAQAISVLHE 60
Db 1 MCDLPQTHSLGNRRALILLAQMRRISPFSCLKDRHDFGFPQEEFDGNQFQKAQAISVLHE 60

Qy 61 MIQQTFNLFSTKDSSAAWDESLLEKFYTELYQQLNDLEACVIQEVGVEETPLMNVDSILA 120
Db 61 MIQQTFNLFSTKDSSAAWDESLLEKFYTELYQQLNDLEACVIQEVGVEETPLMNVDSILA 120

Qy 121 VKKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSLSTNLQERLRRKE 167
Db 121 VKKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSLSTNLQERLRRKE 167

RESULT 9
AEE61639
ID AEE61639 standard; protein; 167 AA.
XX
AC AEE61639;
XX
DT 09-FEB-2006 (first entry)
XX
DE Human interferon-alpha consensus protein - SEQ ID 58.
XX
KW protein engineering; virucide; antiinflammatory; hepatotropic; anti-HIV;
KW gene therapy; cytostatic; viral infection; hepatitis C virus infection;
KW hepatitis B virus infection; HIV infection; hairy cell leukemia;
KW melanoma; nodular lymphoma; non-Hodgkin's lymphoma; bladder tumor;
KW acquired immune deficiency syndrome; crohns disease;
KW cell differentiation; interferon-alpha.
XX
OS Homo sapiens.
OS Synthetic.
XX
PN US2005266465-A1.
XX
PD 01-DEC-2005.
XX
PF 18-MAY-2005; 2005US-00132722.

XX
PR 19-MAY-2004; 2004US-0572504P.
XX
PA (MAXY-) MAXYGEN INC.
PA (ROCH-) ROCHE PALO ALTO LLC.
XX
PI Patten PA, Viswanathan S, Nissen TL, Vogt A, Kropshofer H;
PI Schumacher R, Fischer S, Seeber S, Grossmann A, Hesse F;
PI Schaubmar A, Falkenstein R, Koll H, Dembowski M, Adam SS;
XX
DR WPI; 2006-027231/03.
XX
PT Novel isolated or recombinant interferon-alpha polypeptide exhibiting
PT antiviral activity, useful for reducing number of copies of virus in
PT cells infected with virus.
XX
PS Example 2; SEQ ID NO 58; 123pp; English.
XX
CC The invention relates to a novel isolated or recombinant interferon (IFN)
CC -alpha polypeptide comprising a sequence differing in 1-16 amino acid
CC positions from a fully defined amino acid sequence (SEQ ID No. 1) given
CC in the specification, and comprising one or more substitutions relative
CC to SEQ ID No. 1 chosen from F48A/L, V51P, F55A, F65A, F68P, L111A and
CC V114P, where the polypeptide exhibits antiviral activity. The
CC polypeptides of the invention demonstrate virucide, antiinflammatory,
CC hepatotropic, anti-HIV, gene therapy and cytostatic applications and may
CC be useful for reducing the number of copies of a virus in cells infected
CC with the virus, in particular for reducing the level of Hepatitis C virus
CC (HCV) RNA, Hepatitis B virus (HBV) DNA or HIV RNA in the serum of a
CC patient infected with HCV, HBV or HIV. Furthermore, the polypeptides may
CC be utilized for treating hairy cell leukemia, malignant melanoma,
CC follicular lymphoma, non-Hodgkin's lymphoma, bladder cancer, Crohn's
CC disease and AIDS, and for enhancing TH1 differentiation of TH0 cells. The
CC current sequence is that of the human interferon-alpha consensus protein
CC of the invention.
XX
SQ Sequence 167 AA;

Query Match 100.0%; Score 861; DB 10; Length 167;
Best Local Similarity 100.0%; Pred. No. 3.7e-78;
Matches 167; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 MCDLPQTHSLGNRRALILLAQMRRISPFSCLKDRHDFGFPQEEFDGNQFQKAQAISVLHE 60
Db 1 MCDLPQTHSLGNRRALILLAQMRRISPFSCLKDRHDFGFPQEEFDGNQFQKAQAISVLHE 60

Qy 61 MIQQTFNLFSTKDSSAAWDESLLEKFYTELYQQLNDLEACVIQEVGVEETPLMNVDSILA 120
Db 61 MIQQTFNLFSTKDSSAAWDESLLEKFYTELYQQLNDLEACVIQEVGVEETPLMNVDSILA 120

Qy 121 VKKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSLSTNLQERLRRKE 167
Db 121 VKKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSLSTNLQERLRRKE 167

RESULT 10
AEF91511
ID AEF91511 standard; protein; 167 AA.
XX
AC AEF91511;
XX
DT 20-APR-2006 (first entry)
XX
DE Consensus interferon agent Infergen.
XX
KW immunosuppressive; pharmaceutical; therapeutic; glycosylation;
KW protein therapy; autoimmune disease; immune disorder; infergen.
XX
OS Synthetic.
XX
PN WO2006020580-A2.
XX
PD 23-FEB-2006.
XX
PF 08-AUG-2005; 2005WO-US028165.
XX
PR 09-AUG-2004; 2004US-0600134P.
PR 09-AUG-2004; 2004US-0600202P.
PR 24-AUG-2004; 2004US-0604280P.
PR 24-AUG-2004; 2004US-0604415P.
XX
PA (INTE-) INTERMUNE INC.
XX
PI Hong J, Seiwert SD, Blatt LM;
XX
DR WPI; 2006-174126/18.
XX
PT New oral pharmaceutical composition comprising protease-resistant,
PT hyperglycosylated polypeptide variant of a parent protein therapeutic.
XX
PS Disclosure; Fig 30; 306pp; English.
XX
CC The invention describes an oral pharmaceutical composition comprising a
CC protease-resistant, hyperglycosylated polypeptide variant of a parent
CC protein therapeutic in a first unit form, and pharmaceutical excipient
CC suitable for oral delivery. Also described are: a method of treating a
CC disease in a patient comprising: administering orally to the patient the
CC oral pharmaceutical composition; a synthetic Type I Interferon receptor
CC polypeptide agonist; a polynucleotide comprising a nucleotide sequence
CC encoding a synthetic Type I interferon receptor polypeptide agonist; an
CC expression vector comprising the polynucleotide operably linked to a
CC promoter functional in a eukaryotic cell; and a host cell comprising the
CC polynucleotide or expression vector. The oral pharmaceutical composition
CC is useful for treating a disease, e.g. autoimmune diseases. This is the
CC amino acid sequence of consensus interferon agent infergen.
XX
SQ Sequence 167 AA;

Query Match 100.0%; Score 861; DB 10; Length 167;
Best Local Similarity 100.0%; Pred. No. 3.7e-78;
Matches 167; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 MCDLPQTHSLGNRRALILLAQMRRISPFSCLKDRHDFGFPQEEFDGNQFQKAQAISVLHE 60
Db 1 MCDLPQTHSLGNRRALILLAQMRRISPFSCLKDRHDFGFPQEEFDGNQFQKAQAISVLHE 60

Qy 61 MIQQTFNLFSTKDSSAAWDESLLEKFYTELYQQLNDLEACVIQEVGVEETPLMNVDSILA 120
Db 61 MIQQTFNLFSTKDSSAAWDESLLEKFYTELYQQLNDLEACVIQEVGVEETPLMNVDSILA 120

Qy 121 VKKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSLSTNLQERLRRKE 167
Db 121 VKKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSLSTNLQERLRRKE 167

RESULT 11
AEF91468
ID AEF91468 standard; protein; 167 AA.
XX
AC AEF91468;
XX
DT 20-APR-2006 (first entry)
XX
DE Consensus interferon agent Infergen.
XX
KW immunosuppressive; pharmaceutical; therapeutic; glycosylation;
KW protein therapy; autoimmune disease; immune disorder; infergen.
XX
OS Synthetic.
XX
PN WO2006020580-A2.
XX
PD 23-FEB-2006.
XX
PF 08-AUG-2005; 2005WO-US028165.
XX

PR 09-AUG-2004; 2004US-0600134P.
PR 09-AUG-2004; 2004US-0600202P.
PR 24-AUG-2004; 2004US-0604280P.
PR 24-AUG-2004; 2004US-0604415P.
XX
PA (INTE-) INTERMUNE INC.
XX
PI Hong J, Seiwert SD, Blatt LM;
XX
DR WPI; 2006-174126/18.
XX
PT New oral pharmaceutical composition comprising protease-resistant,
PT hyperglycosylated polypeptide variant of a parent protein therapeutic.
XX
PS Disclosure; Fig 24; 306pp; English.
XX
CC The invention describes an oral pharmaceutical composition comprising a
CC protease-resistant, hyperglycosylated polypeptide variant of a parent
CC protein therapeutic in a first unit form, and pharmaceutical excipient
CC suitable for oral delivery. Also described are: a method of treating a
CC disease in a patient comprising: administering orally to the patient the
CC oral pharmaceutical composition; a synthetic Type I Interferon receptor
CC polypeptide agonist; a polynucleotide comprising a nucleotide sequence
CC encoding a synthetic Type I interferon receptor polypeptide agonist; an
CC expression vector comprising the polynucleotide operably linked to a
CC promoter functional in a eukaryotic cell; and a host cell comprising the
CC polynucleotide or expression vector. The oral pharmaceutical composition
CC is useful for treating a disease, e.g. autoimmune diseases. This is the
CC amino acid sequence of consensus interferon agent infergen.
XX
SQ Sequence 167 AA;

Query Match 100.0%; Score 861; DB 10; Length 167;
Best Local Similarity 100.0%; Pred. No. 3.7e-78;
Matches 167; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```
Qy          1 MCDLPQTHSLGNRRALILLAQMRRISPFSCLKDRHDFGFPQEEFDGNQFQKAQAISVLHE 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 MCDLPQTHSLGNRRALILLAQMRRISPFSCLKDRHDFGFPQEEFDGNQFQKAQAISVLHE 60

Qy         61 MIQQTFNLFSTKDSSAAWDESLLEKFYTELYQQLNDLEACVIQEVGVEETPLMNVDSILA 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 MIQQTFNLFSTKDSSAAWDESLLEKFYTELYQQLNDLEACVIQEVGVEETPLMNVDSILA 120

Qy        121 VKKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSLSTNLQERLRRKE 167
              |||||||||||||||||||||||||||||||||||||||||||||||
Db        121 VKKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSLSTNLQERLRRKE 167
```

RESULT 12
AEF91486
ID AEF91486 standard; protein; 167 AA.
XX
AC AEF91486;
XX
DT 20-APR-2006 (first entry)
XX
DE Consensus interferon agent Infergen.
XX
KW immunosuppressive; pharmaceutical; therapeutic; glycosylation;
KW protein therapy; autoimmune disease; immune disorder; infergen.
XX
OS Synthetic.
XX
PN WO2006020580-A2.
XX
PD 23-FEB-2006.
XX
PF 08-AUG-2005; 2005WO-US028165.
XX
PR 09-AUG-2004; 2004US-0600134P.
PR 09-AUG-2004; 2004US-0600202P.
PR 24-AUG-2004; 2004US-0604280P.
PR 24-AUG-2004; 2004US-0604415P.
XX
PA (INTE-) INTERMUNE INC.
XX
PI Hong J, Seiwert SD, Blatt LM;
XX
DR WPI; 2006-174126/18.
DR N-PSDB; AEF91485.
XX
PT New oral pharmaceutical composition comprising protease-resistant,
PT hyperglycosylated polypeptide variant of a parent protein therapeutic.
XX
PS Disclosure; Fig 26; 306pp; English.
XX
CC The invention describes an oral pharmaceutical composition comprising a
CC protease-resistant, hyperglycosylated polypeptide variant of a parent
CC protein therapeutic in a first unit form, and pharmaceutical excipient
CC suitable for oral delivery. Also described are: a method of treating a
CC disease in a patient comprising: administering orally to the patient the
CC oral pharmaceutical composition; a synthetic Type I Interferon receptor
CC polypeptide agonist; a polynucleotide comprising a nucleotide sequence
CC encoding a synthetic Type I interferon receptor polypeptide agonist; an
CC expression vector comprising the polynucleotide operably linked to a
CC promoter functional in a eukaryotic cell; and a host cell comprising the
CC polynucleotide or expression vector. The oral pharmaceutical composition
CC is useful for treating a disease, e.g. autoimmune diseases. This is the
CC amino acid sequence of consensus interferon agent infergen.
XX
SQ Sequence 167 AA;

Query Match 100.0%; Score 861; DB 10; Length 167;
Best Local Similarity 100.0%; Pred. No. 3.7e-78;
Matches 167; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```
Qy          1 MCDLPQTHSLGNRRALILLAQMRRISPFSCLKDRHDFGFPQEEFDGNQFQKAQAISVLHE 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 MCDLPQTHSLGNRRALILLAQMRRISPFSCLKDRHDFGFPQEEFDGNQFQKAQAISVLHE 60

Qy         61 MIQQTFNLFSTKDSSAAWDESLLEKFYTELYQQLNDLEACVIQEVGVEETPLMNVDSILA 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 MIQQTFNLFSTKDSSAAWDESLLEKFYTELYQQLNDLEACVIQEVGVEETPLMNVDSILA 120

Qy        121 VKKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSLSTNLQERLRRKE 167
              |||||||||||||||||||||||||||||||||||||||||||||||
Db        121 VKKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSLSTNLQERLRRKE 167
```

RESULT 13
ADO32386
ID ADO32386 standard; protein; 166 AA.
XX
AC ADO32386;
XX
DT 26-AUG-2004 (first entry)
XX
DE Human interferon alpha Con1 protein SeqID 43.
XX
KW human; interferon alpha; IFN; antiviral; immunomodulatory; cytokine;
KW cellular proliferation; autoimmune disorder; inflammatory disorder;
KW viral infection.
XX
OS Homo sapiens.
XX
PN WO2004046365-A2.
XX
PD 03-JUN-2004.
XX
PF 17-NOV-2003; 2003WO-US036682.
XX
PR 18-NOV-2002; 2002US-0427612P.
PR 12-SEP-2003; 2003US-0502560P.
XX
PA (MAXY-) MAXYGEN INC.

XX
PI Patten PA, Govindarajan S, Viswanathan S;
XX
DR WPI; 2004-431982/40.
XX
PT Novel isolated or recombinant interferon alpha polypeptide exhibiting
PT antiviral activity, useful as medicament for inhibiting replication of
PT hepatitis C virus or hepatitis B virus in cells infected with virus.
XX
PS Example 2; SEQ ID NO 43; 256pp; English.
XX
CC This invention relates to novel isolated or recombinant interferon (IFN)
CC alpha proteins and conjugates thereof that comprise attachment groups for
CC non-protein moieties. Specifically, it provides the nucleic acids that
CC encode these IFN-alpha proteins and which exhibit enhanced antiviral and
CC immunomodulatory activities. The present invention describes IFN-alpha
CC proteins as members of the cytokine family that inhibit a variety of
CC cellular proliferation, autoimmune and inflammatory disorders as well as
CC viral infections. Accordingly, they can be used in the development of
CC medicaments for inhibiting viral replication in cells infected with a
CC virus or reducing the number of viral copies, particularly where the
CC virus is hepatitis C virus (HCV) or hepatitis B virus (HBV). In addition,
CC it can be used to produce antibodies for the diagnosis and treatment of
CC viral infections. This polypeptide sequence is a human interferon-alpha
CC Con1 protein of the invention.
XX
SQ Sequence 166 AA;

Query Match 99.4%; Score 856; DB 8; Length 166;
Best Local Similarity 100.0%; Pred. No. 1.2e-77;
Matches 166; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```
Qy          2 CDLPQTHSLGNRRALILLAQMRRISPFSCLKDRHDFGFPQEEFDGNQFQKAQAISVLHEM 61
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 CDLPQTHSLGNRRALILLAQMRRISPFSCLKDRHDFGFPQEEFDGNQFQKAQAISVLHEM 60

Qy         62 IQQTFNLFSTKDSSAAWDESLLEKFYTELYQQLNDLEACVIQEVGVEETPLMNVDSILAV 121
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 IQQTFNLFSTKDSSAAWDESLLEKFYTELYQQLNDLEACVIQEVGVEETPLMNVDSILAV 120

Qy        122 KKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSLSTNLQERLRRKE 167
              |||||||||||||||||||||||||||||||||||||||||||||
Db        121 KKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSLSTNLQERLRRKE 166
```

RESULT 14
AED67249
ID AED67249 standard; protein; 166 AA.
XX
AC AED67249;
XX
DT 12-JAN-2006 (first entry)
XX
DE Human interferon-alpha-2a partial polypeptide SEQ ID NO:25.
XX
KW interferon-alpha; endocrine-gen.; osteopathic; ophthalmological;
KW cytostatic; vasotropic; therapeutic.
XX
OS Homo sapiens.
XX
PN US2005220762-A1.
XX
PD 06-OCT-2005.
XX
PF 28-JAN-2005; 2005US-00046440.
XX
PR 02-FEB-2004; 2004US-0541528P.
PR 18-JUN-2004; 2004US-0580885P.
PR 18-JUN-2004; 2004US-0581175P.
PR 18-JUN-2004; 2004US-0581314P.
PR 22-DEC-2004; 2004US-0638616P.
XX
PA (AMBR-) AMBRX INC.
XX
PI Cho HS, Daniel TO, Hays A, Wilson TE;
XX
DR WPI; 2005-777263/79.
XX
PT New human interferon polypeptide, useful for treating a disease, e.g.
PT gigantism, acromegaly, vascular eye disease, macular degeneration, or
PT sarcomas.
XX
PS Example 11; SEQ ID NO 25; 129pp; English.
XX
CC The invention relates to a novel human interferon (hIFN) polypeptide
CC comprising one or more non-naturally encoded amino acids. A hIFN
CC polypeptide of the invention has endocrine-gen., osteopathic,
CC ophthalmological, cytostatic, and vasotropic activity. The hIFN comprises
CC a sequence of 165 amino acids (AED67248) encoded by a nucleic acid
CC comprising a nucleotide sequence of 567 or 498 bp (AED67250 or AED67251).
CC The polypeptide, nucleic acid, composition, and method are useful for
CC treating a disease, e.g. gigantism, acromegaly, vascular eye disease,
CC macular degeneration, or sarcomas. The present sequence represents a
CC partial human interferon-alpha-2a polypeptide of the invention.
XX
SQ Sequence 166 AA;

Query Match 99.4%; Score 856; DB 9; Length 166;
Best Local Similarity 100.0%; Pred. No. 1.2e-77;
Matches 166; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```
Qy          2 CDLPQTHSLGNRRALILLAQMRRISPFSCLKDRHDFGFPQEEFDGNQFQKAQAISVLHEM 61
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 CDLPQTHSLGNRRALILLAQMRRISPFSCLKDRHDFGFPQEEFDGNQFQKAQAISVLHEM 60

Qy         62 IQQTFNLFSTKDSSAAWDESLLEKFYTELYQQLNDLEACVIQEVGVEETPLMNVDSILAV 121
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 IQQTFNLFSTKDSSAAWDESLLEKFYTELYQQLNDLEACVIQEVGVEETPLMNVDSILAV 120

Qy        122 KKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSLSTNLQERLRRKE 167
              |||||||||||||||||||||||||||||||||||||||||||||
Db        121 KKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSLSTNLQERLRRKE 166
```

RESULT 15
AEF91512
ID AEF91512 standard; protein; 189 AA.
XX
AC AEF91512;
XX
DT 20-APR-2006 (first entry)
XX
DE Infergen-IFN-alpha 14 signal peptide fusion protein.
XX
KW immunosuppressive; pharmaceutical; therapeutic; glycosylation;
KW protein therapy; autoimmune disease; immune disorder; infergen;
KW interferon alpha 14; IFN-alpha 14.
XX
OS Homo sapiens.
OS Synthetic.
XX
PN WO2006020580-A2.
XX
PD 23-FEB-2006.
XX
PF 08-AUG-2005; 2005WO-US028165.
XX
PR 09-AUG-2004; 2004US-0600134P.
PR 09-AUG-2004; 2004US-0600202P.
PR 24-AUG-2004; 2004US-0604280P.
PR 24-AUG-2004; 2004US-0604415P.
XX
PA (INTE-) INTERMUNE INC.
XX
PI Hong J, Seiwert SD, Blatt LM;
XX

DR WPI; 2006-174126/18.
XX
PT New oral pharmaceutical composition comprising protease-resistant,
PT hyperglycosylated polypeptide variant of a parent protein therapeutic.
XX
PS Disclosure; Fig 30; 306pp; English.
XX
CC The invention describes an oral pharmaceutical composition comprising a
CC protease-resistant, hyperglycosylated polypeptide variant of a parent
CC protein therapeutic in a first unit form, and pharmaceutical excipient
CC suitable for oral delivery. Also described are: a method of treating a
CC disease in a patient comprising: administering orally to the patient the
CC oral pharmaceutical composition; a synthetic Type I Interferon receptor
CC polypeptide agonist; a polynucleotide comprising a nucleotide sequence
CC encoding a synthetic Type I interferon receptor polypeptide agonist; an
CC expression vector comprising the polynucleotide operably linked to a
CC promoter functional in a eukaryotic cell; and a host cell comprising the
CC polynucleotide or expression vector. The oral pharmaceutical composition
CC is useful for treating a disease, e.g. autoimmune diseases. This is the
CC amino acid sequence of consensus interferon agent infergen fused to the
CC signal peptide from human interferon alpha 14 (IFN-alpha 14).
XX
SQ Sequence 189 AA;

Query Match 99.4%; Score 856; DB 10; Length 189;
Best Local Similarity 100.0%; Pred. No. 1.4e-77;
Matches 166; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy          2 CDLPQTHSLGNRRALILLAQMRRISPFSCLKDRHDFGFPQEEFDGNQFQKAQAISVLHEM 61
              |||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         24 CDLPQTHSLGNRRALILLAQMRRISPFSCLKDRHDFGFPQEEFDGNQFQKAQAISVLHEM 83

Qy         62 IQQTFNLFSTKDSSAAWDESLLEKFYTELYQQLNDLEACVIQEVGVEETPLMNVDSILAV 121
              |||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         84 IQQTFNLFSTKDSSAAWDESLLEKFYTELYQQLNDLEACVIQEVGVEETPLMNVDSILAV 143

Qy        122 KKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSLSTNLQERLRRKE 167
              |||||||||||||||||||||||||||||||||||||||||||||
Db        144 KKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSLSTNLQERLRRKE 189
```

Search completed: September 1, 2006, 13:22:10
Job time : 197 secs

GenCore version 5.1.9

OM protein - protein search, using sw model

Run on: September 1, 2006, 13:22:29 ; Search time 39 Seconds
(without alignments)
412.005 Million cell updates/sec

Title: US-10-650-365A-2
Perfect score: 861
Sequence: 1 MCDLPQTHSLGNRRALILLA.....EIMRSFSLSTNLQERLRRKE 167

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 283416 seqs, 96216763 residues

Total number of hits satisfying chosen parameters: 283416

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : PIR_80:*
1: pir1:*
2: pir2:*
3: pir3:*
4: pir4:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	804	93.4	167	2	E25843	interferon alpha-F
2	801	93.0	181	2	I56313	interferon alpha 2
3	801	93.0	189	1	IVHUA7	interferon alpha-5
4	801	93.0	189	2	I84464	interferon-alpha-F
5	799	92.8	189	1	IVHUF	interferon alpha-I
6	797	92.6	167	2	D25843	interferon alpha-G
7	788	91.5	189	1	IVHU4B	interferon alpha-I
8	786	91.3	189	2	I52347	interferon alpha-M
9	785	91.2	176	2	I56314	interferon-alpha -
10	780	90.6	189	2	I51970	interferon precurs
11	776	90.1	189	1	IVHUA5	interferon alpha-5
12	768	89.2	189	1	IVHU14	interferon alpha-I
13	767	89.1	189	1	IVHUA9	interferon alpha-1
14	760	88.3	189	2	I53102	interferon-alpha-J
15	759	88.2	167	2	F25843	interferon alpha-J
16	754	87.6	189	1	IVHUA0	interferon alpha-7
17	753	87.5	189	1	IVHUI6	interferon alpha-I
18	747.5	86.8	165	2	I78570	alpha 2 interferon
19	747	86.8	189	1	IVHUA1	interferon alpha-1
20	744.5	86.5	188	1	IVHUA2	interferon alpha-2
21	744	86.4	189	1	IVHU16	interferon alpha-I
22	738	85.7	189	2	I37584	IFN-alpha-N-protei
23	734	85.2	189	1	IVHUI8	interferon alpha-I
24	719	83.5	162	2	C25843	interferon alpha-B
25	714	82.9	189	1	IVHUA4	interferon alpha-4
26	674	78.3	184	1	IVHOA4	interferon alpha-I
27	670	77.8	184	1	IVHOA2	interferon alpha-I
28	669	77.7	184	1	IVHOA1	interferon alpha-I
29	669	77.7	184	1	IVHOA3	interferon alpha-I
30	628	72.9	189	2	S23709	interferon alpha-1
31	574	66.7	189	1	IVMSA5	interferon alpha-I
32	569	66.1	189	1	IVBOI1	interferon alpha-I
33	569	66.1	189	1	IVBOIB	interferon alpha-I
34	568	66.0	189	1	IVMSA1	interferon alpha-I
35	564	65.5	189	1	IVBOID	interferon alpha-I
36	562	65.3	190	2	I49774	alpha-interferon -
37	561	65.2	189	1	IVBOIA	interferon alpha-I
38	557	64.7	189	1	IVBOIC	interferon alpha-I
39	549	63.8	190	2	I49772	interferon alpha-7
40	542	63.0	190	2	A24401	interferon alpha-I
41	542	63.0	192	1	IVRTA1	interferon alpha-I
42	537	62.4	190	2	I49775	interferon alpha-B
43	535	62.1	190	1	IVMSA2	interferon alpha-2
44	523	60.7	190	2	JH0468	interferon alpha-1
45	519	60.3	189	1	IVMSA6	interferon alpha-I

ALIGNMENTS

RESULT 1
E25843
interferon alpha-F - human
N;Alternate names: human leukocyte interferon (IFN)
C;Species: Homo sapiens (man)
C;Date: 16-Aug-1988 #sequence_revision 16-Aug-1988 #text_change 09-Jul-2004
C;Accession: E25843
R;Ohara, O.; Teraoka, H.
FEBS Lett. 211, 78-82, 1987
A;Title: Anomalous behavior of human leukocyte interferon subtypes on polyacrylamide ge
A;Reference number: A91374; MUID:87105954; PMID:3803589
A;Accession: E25843
A;Status: nucleic acid sequence not shown; not compared with conceptual translation
A;Molecule type: mRNA
A;Residues: 1-167 <OHA>
A;Cross-references: UNIPROT:Q14608; UNIPARC:UPI0000176711
C;Superfamily: interferon alpha

Query Match 93.4%; Score 804; DB 2; Length 167;
Best Local Similarity 94.0%; Pred. No. 4.4e-65;
Matches 157; Conservative 3; Mismatches 7; Indels 0; Gaps 0;

```
Qy          1 MCDLPQTHSLGNRRALILLAQMRRISPFSCLKDRHDFGFPQEEFDGNQFQKAQAISVLHE 60
              |||||||||||||||||||||| ||||||||||||||||||||||||||||||||||||||
Db          1 MCDLPQTHSLGNRRALILLAQMGRISPFSCLKDRHDFGFPQEEFDGNQFQKAQAISVLHE 60

Qy         61 MIQQTFNLFSTKDSSAAWDESLLEKFYTELYQQLNDLEACVIQEVGVEETPLMNVDSILA 120
              |||||||||||||||| |::|||||| ||| |||||:|||||||||||||||||||||||
Db         61 MIQQTFNLFSTKDSSATWEQSLLEKFSTELNQQLNDMEACVIQEVGVEETPLMNVDSILA 120

Qy        121 VKKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSLSTNLQERLRRKE 167
              |||||||||||||||||||||||||||||||||||    ||||||||
Db        121 VKKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSLSKIFQERLRRKE 167
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RESULT 2
I56313
interferon alpha 21 - human
C;Species: Homo sapiens (man)
C;Date: 02-Jul-1996 #sequence_revision 02-Jul-1996 #text_change 09-Jul-2004
C;Accession: I56313
R;Gren, E.; Berzin, V.M.; Jansone, I.; Tsimanis, A.; Vishnevsky, Y.; Apsalons, U.
J. Interferon Res. 4, 609-617, 1984
A;Title: Novel human leukocyte interferon subtype and structural comparison of alpha in
A;Reference number: I56313; MUID:85056523; PMID:6548765
A;Accession: I56313
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: mRNA
A;Residues: 1-181 <RES>
A;Cross-references: UNIPROT:Q14608; UNIPARC:UPI000006E7D8; GB:M28586; NID:g184636; PIDN
C;Genetics:
A;Gene: GDB:IFNA21

```
A;Cross-references: GDB:136360; OMIM:147584
A;Map position: 9p22-9p22
C;Superfamily: interferon alpha

  Query Match             93.0%;  Score 801;  DB 2;  Length 181;
  Best Local Similarity   94.6%;  Pred. No. 9.1e-65;
  Matches  157;  Conservative    2;  Mismatches    7;  Indels    0;  Gaps    0;

Qy          2 CDLPQTHSLGNRRALILLAQMRRISPFSCLKDRHDFGFPQEEFDGNQFQKAQAISVLHEM 61
              |||||||||||||||||||| |||||||||||||||||||||||||||||||||||||||
Db         16 CDLPQTHSLGNRRALILLAQMGRISPFSCLKDRHDFGFPQEEFDGNQFQKAQAISVLHEM 75

Qy         62 IQQTFNLFSTKDSSAAWDESLLEKFYTELYQQLNDLEACVIQEVGVEETPLMNVDSILAV 121
              ||||||||||||||| |::|||||| ||| ||||||||||||||||||||||||||||||
Db         76 IQQTFNLFSTKDSSATWEQSLLEKFSTELNQQLNDLEACVIQEVGVEETPLMNVDSILAV 135

Qy        122 KKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSLSTNLQERLRRKE 167
              |||||||||||||||||||||||||||||||||||   |||||||
Db        136 KKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSLSKIFQERLRRKE 181


RESULT 3
IVHUA7
interferon alpha-5 precursor - human
N;Alternate names: interferon alpha-G
C;Species: Homo sapiens (man)
C;Date: 01-Sep-1981 #sequence_revision 29-Jan-1999 #text_change 09-Jul-2004
C;Accession: S43716; A01833
R;Henco, K.; Brosius, J.; Fujisawa, A.; Fujisawa, J.I.; Haynes, J.R.; Hochstadt, J.; Kov
J. Mol. Biol. 185, 227-260, 1985
A;Title: Structural relationship of human interferon alpha genes and pseudogenes.
A;Reference number: A92916; MUID:86037205; PMID:4057246
A;Accession: S43716
A;Molecule type: DNA
A;Residues: 1-189 <HEN>
A;Cross-references: UNIPROT:P01569; UNIPARC:UPI0000047760; EMBL:X02956; NID:g32659; PIDN
R;Goeddel, D.V.; Leung, D.W.; Dull, T.J.; Gross, M.; Lawn, R.M.; McCandliss, R.; Seeburg
Nature 290, 20-26, 1981
A;Title: The structure of eight distinct cloned human leukocyte interferon cDNAs.
A;Reference number: A93249; MUID:81148795; PMID:6163083
A;Accession: A01833
A;Molecule type: mRNA
A;Residues: 57-189 <GOE>
A;Cross-references: UNIPARC:UPI0000141F4A; GB:V00541; GB:J00213; NID:g32718; PIDN:CAA238
A;Note: eight classes of interferon alpha clones were identified; this sequence is deriv
C;Genetics:
A;Gene: GDB:IFNA5
A;Cross-references: GDB:136362; OMIM:147565
A;Map position: 9p22-9p22
C;Superfamily: interferon alpha
C;Keywords: antiviral; cytokine; leukocyte
F;1-23/Domain: signal sequence #status predicted <SIG>
F;24-189/Product: interferon alpha-5 #status predicted <MAT>

  Query Match             93.0%;  Score 801;  DB 1;  Length 189;
  Best Local Similarity   91.0%;  Pred. No. 9.6e-65;
  Matches  151;  Conservative    9;  Mismatches    6;  Indels    0;  Gaps    0;

Qy          2 CDLPQTHSLGNRRALILLAQMRRISPFSCLKDRHDFGFPQEEFDGNQFQKAQAISVLHEM 61
              ||||||||| ||| |:::||| |||||||||||||||||||||||||||||||||||||
Db         24 CDLPQTHSLSNRRTLMIMAQMGRISPFSCLKDRHDFGFPQEEFDGNQFQKAQAISVLHEM 83

Qy         62 IQQTFNLFSTKDSSAAWDESLLEKFYTELYQQLNDLEACVIQEVGVEETPLMNVDSILAV 121
              |||||||||||||| |||:||:||||||||||||||::||||||:|||||||||| |
Db         84 IQQTFNLFSTKDSSATWDETLLDKFYTELYQQLNDLEACMMQEVGVEDTPLMNVDSILTV 143

Qy        122 KKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSLSTNLQERLRRKE 167
              :|||||||||||||||||||||||||||||||| ||||||||||
Db        144 RKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSLSANLQERLRRKE 189


RESULT 4
I84464
interferon-alpha-F - human
C;Species: Homo sapiens (man)
C;Date: 02-Aug-1996 #sequence_revision 02-Aug-1996 #text_change 09-Jul-2004
C;Accession: I84464; I37583
R;Gren, E.Y.; Berzin, V.M.; Tsimanis, A.Y.; Apsalon, U.R.; Vishnevskii, Y.I.; Yansone,
.A.; Lozha, V.P.; Kavsan, V.M.; Efimov, V.A.; Sverdlov, E.D.
Dokl. Biochem. 269, 91-95, 1983
A;Title: A new type of leukocytic interferon.
A;Reference number: I37583
A;Accession: I84464
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: mRNA
A;Residues: 1-189 <RES>
A;Cross-references: UNIPROT:P01568; UNIPARC:UPI000002C35A; GB:M12350; NID:g184598; PIDN
A;Accession: I37583
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: mRNA
A;Residues: 1-189 <RE2>
A;Cross-references: UNIPARC:UPI000002C35A; EMBL:X00145; NID:g32724; PIDN:CAA24980.1; PI
C;Genetics:
A;Gene: IFNA
C;Superfamily: interferon alpha

  Query Match             93.0%;  Score 801;  DB 2;  Length 189;
  Best Local Similarity   94.6%;  Pred. No. 9.6e-65;
  Matches  157;  Conservative    2;  Mismatches    7;  Indels    0;  Gaps    0;

Qy          2 CDLPQTHSLGNRRALILLAQMRRISPFSCLKDRHDFGFPQEEFDGNQFQKAQAISVLHEM 61
              |||||||||||||||||||| |||||||||||||||||||||||||||||||||||||||
Db         24 CDLPQTHSLGNRRALILLAQMGRISPFSCLKDRHDFGFPQEEFDGNQFQKAQAISVLHEM 83

Qy         62 IQQTFNLFSTKDSSAAWDESLLEKFYTELYQQLNDLEACVIQEVGVEETPLMNVDSILAV 121
              |||||||||||||| |::|||||| ||| ||||||||||||||||||||||||||||||
Db         84 IQQTFNLFSTKDSSATWEQSLLEKFSTELNQQLNDLEACVIQEVGVEETPLMNVDSILAV 143

Qy        122 KKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSLSTNLQERLRRKE 167
              |||||||||||||||||||||||||||||||||||   |||||||
Db        144 KKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSLSKIFQERLRRKE 189


RESULT 5
IVHUF
interferon alpha-I-F precursor - human
N;Alternate names: HuIFN-alpha-I-F; LeIF F; type I interferon
C;Species: Homo sapiens (man)
C;Date: 01-Sep-1981 #sequence_revision 01-Sep-1981 #text_change 09-Jul-2004
C;Accession: A01832
R;Goeddel, D.V.; Leung, D.W.; Dull, T.J.; Gross, M.; Lawn, R.M.; McCandliss, R.; Seebur
Nature 290, 20-26, 1981
A;Title: The structure of eight distinct cloned human leukocyte interferon cDNAs.
A;Reference number: A93249; MUID:81148795; PMID:6163083
A;Accession: A01832
A;Molecule type: mRNA
A;Residues: 1-189 <GOE>
A;Cross-references: UNIPROT:P01568; UNIPARC:UPI0000047762; GB:V00540; GB:J00212; NID:g3
A;Note: eight classes of interferon alpha clones were identified; this sequence is deri
C;Genetics:
A;Gene: GDB:IFN1@
A;Cross-references: GDB:119328; OMIM:147660
A;Map position: 9p22-9p22
C;Superfamily: interferon alpha
C;Keywords: antiviral
F;1-23/Domain: signal sequence #status predicted <SIG>
F;24-189/Product: interferon alpha-I-F #status predicted <MAT>
F;24-122,52-162/Disulfide bonds: #status predicted

  Query Match             92.8%;  Score 799;  DB 1;  Length 189;
  Best Local Similarity   94.0%;  Pred. No. 1.5e-64;
  Matches  156;  Conservative    3;  Mismatches    7;  Indels    0;  Gaps    0;

Qy          2 CDLPQTHSLGNRRALILLAQMRRISPFSCLKDRHDFGFPQEEFDGNQFQKAQAISVLHEM 61
              |||||||||||||||||||| |||||||||||||||||||||||||||||||||||||||
Db         24 CDLPQTHSLGNRRALILLAQMGRISPFSCLKDRHDFGFPQEEFDGNQFQKAQAISVLHEM 83
```

```
Qy         62 IQQTFNLFSTKDSSAAWDESLLEKFYTELYQQLNDLEACVIQEVGVEETPLMNVDSILAV 121
              |||||||||||||||| |::|||||| ||| |||||:|||||||||||||||||||||||||
Db         84 IQQTFNLFSTKDSSATWEQSLLEKFSTELNQQLNDMEACVIQEVGVEETPLMNVDSILAV 143

Qy        122 KKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSLSTNLQERLRRKE 167
              |||||||||||||||||||||||||||||||||||||||   ||||||||
Db        144 KKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSLSKIFQERLRRKE 189


RESULT 6
D25843
interferon alpha-G - human
N;Alternate names: human leukocyte interferon (IFN)
C;Species: Homo sapiens (man)
C;Date: 16-Aug-1988 #sequence_revision 16-Aug-1988 #text_change 15-Jun-1996
C;Accession: D25843
R;Ohara, O.; Teraoka, H.
FEBS Lett. 211, 78-82, 1987
A;Title: Anomalous behavior of human leukocyte interferon subtypes on polyacrylamide gel
A;Reference number: A91374; MUID:87105954; PMID:3803589
A;Accession: D25843
A;Status: nucleic acid sequence not shown; not compared with conceptual translation
A;Molecule type: mRNA
A;Residues: 1-167 <OHA>
A;Cross-references: UNIPARC:UPI0000176717
C;Superfamily: interferon alpha

  Query Match             92.6%;  Score 797;  DB 2;  Length 167;
  Best Local Similarity   91.0%;  Pred. No. 1.9e-64;
  Matches  152;  Conservative    9;  Mismatches    6;  Indels    0;  Gaps    0;

Qy          1 MCDLPQTHSLGNRRALILLAQMRRISPFSCLKDRHDFGFPQEEFDGNQFQKAQAISVLHE 60
              |||||||||| ||| |:::||| ||||||||||||||||||||||||||||||||||||
Db          1 MCDLPQTHSLSNRRTLMIMAQMGRISPFSCLKDRHDFGFPQEEFDGNQFQKAQAISVLHE 60

Qy         61 MIQQTFNLFSTKDSSAAWDESLLEKFYTELYQQLNDLEACVIQEVGVEETPLMNVDSILA 120
              |||||||||||||||| ||:||:||||||||||||::||||||:||||||||||
Db         61 MIQQTFNLFSTKDSSAATDETLLDKFYTELYQQLNDLEACMMQEVGVEDTPLMNVDSILT 120

Qy        121 VKKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSLSTNLQERLRRKE 167
              |:|||||||||||||||||||||||||||||||||| ||||||||||
Db        121 VRKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSLSANLQERLRRKE 167


RESULT 7
IVHU4B
interferon alpha-I-4b precursor - human
N;Alternate names: HuIFN-alpha-I-4b; type I interferon
C;Species: Homo sapiens (man)
C;Date: 28-Dec-1987 #sequence_revision 28-Dec-1987 #text_change 09-Jul-2004
C;Accession: E23753
R;Henco, K.; Brosius, J.; Fujisawa, A.; Fujisawa, J.I.; Haynes, J.R.; Hochstadt, J.; Kov
J. Mol. Biol. 185, 227-260, 1985
A;Title: Structural relationship of human interferon alpha genes and pseudogenes.
A;Reference number: A92916; MUID:86037205; PMID:4057246
A;Accession: E23753
A;Molecule type: DNA
A;Residues: 1-189 <HEN>
A;Cross-references: UNIPROT:P05014; UNIPARC:UPI0000047761; GB:X02955; NID:g32656; PIDN:C
C;Genetics:
A;Gene: GDB:IFN1@
A;Cross-references: GDB:119328; OMIM:147660
A;Map position: 9p22-9p22
C;Superfamily: interferon alpha
C;Keywords: antiviral
F;1-23/Domain: signal sequence #status predicted <SIG>
F;24-189/Product: interferon alpha-I-4b #status predicted <MAT>
F;24-122,52-162/Disulfide bonds: #status predicted

  Query Match             91.5%;  Score 788;  DB 1;  Length 189;
  Best Local Similarity   91.6%;  Pred. No. 1.4e-63;
  Matches  152;  Conservative    8;  Mismatches    6;  Indels    0;  Gaps    0;

Qy          2 CDLPQTHSLGNRRALILLAQMRRISPFSCLKDRHDFGFPQEEFDGNQFQKAQAISVLHEM 61
              |||||||||||||||||||| ||| |||||||||||||:|||||:|||| |||||||||
Db         24 CDLPQTHSLGNRRALILLAQMGRISHFSCLKDRHDFGFPEEEFDGHQFQKTQAISVLHEM 83

Qy         62 IQQTFNLFSTKDSSAAWDESLLEKFYTELYQQLNDLEACVIQEVGVEETPLMNVDSILAV 121
              |||||||||:|||||::|||||| |||||||||||||||||||||||||||||||||||
Db         84 IQQTFNLFSTEDSSAAWEQSLLEKFSTELYQQLNDLEACVIQEVGVEETPLMNVDSILAV 143

Qy        122 KKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSLSTNLQERLRRKE 167
              :|||||||||||||||||||||||||||||| | |||||:|||||:
Db        144 RKYFQRITLYLTEKKYSPCAWEVVRAEIMRSLSFSTNLQKRLRRKD 189


RESULT 8
I52347
interferon alpha-M1 precursor - human
C;Species: Homo sapiens (man)
C;Date: 02-Jul-1996 #sequence_revision 02-Jul-1996 #text_change 09-Jul-2004
C;Accession: I52347
R;Linnane, A.W.; Beilharz, M.W.; McMullen, G.L.; Macreadie, I.G.; Murphy, M.; Nisbet, I
Biochem. Int. 8, 725-732, 1984
A;Title: Nucleotide sequence and expression in E. coli of a human interferon-alpha gene
A;Reference number: I52347; MUID:84307815; PMID:6089830
A;Accession: I52347
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: mRNA
A;Residues: 1-189 <RES>
A;Cross-references: UNIPROT:P05014; UNIPARC:UPI000002BA77; GB:M27318; NID:g184617; PIDN
C;Genetics:
A;Gene: IFNA
C;Superfamily: interferon alpha

  Query Match             91.3%;  Score 786;  DB 2;  Length 189;
  Best Local Similarity   91.6%;  Pred. No. 2.1e-63;
  Matches  152;  Conservative    8;  Mismatches    6;  Indels    0;  Gaps    0;

Qy          2 CDLPQTHSLGNRRALILLAQMRRISPFSCLKDRHDFGFPQEEFDGNQFQKAQAISVLHEM 61
              |||||||||||||||||||| ||| |||||||||||||:|||||:|||| |||||||||
Db         24 CDLPQTHSLGNRRALILLAQMGRISHFSCLKDRHDFGFPEEEFDGHQFQKAQAISVLHEM 83

Qy         62 IQQTFNLFSTKDSSAAWDESLLEKFYTELYQQLNDLEACVIQEVGVEETPLMNVDSILAV 121
              |||||||||:|||||::|||||| |||||||||||||||||||||||||||||||||||
Db         84 IQQTFNLFSTEDSSAAWEQSLLEKFSTELYQQLNDLEACVIQEVGVEETPLMNEDSILAV 143

Qy        122 KKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSLSTNLQERLRRKE 167
              :|||||||||||||||||||||||||||||| | |||||:|||||:
Db        144 RKYFQRITLYLTEKKYSPCAWEVVRAEIMRSLSFSTNLQKRLRRKD 189


RESULT 9
I56314
interferon-alpha - human (fragment)
C;Species: Homo sapiens (man)
C;Date: 02-Jul-1996 #sequence_revision 02-Jul-1996 #text_change 09-Jul-2004
C;Accession: I56314
R;Lund, B.; von Gabain, A.; Edlund, T.; Ny, T.; Lundgren, E.
J. Interferon Res. 5, 229-238, 1985
A;Title: Differential expression of interferon genes in a substrain of Namalwa cells.
A;Reference number: I56314; MUID:85235859; PMID:4008999
A;Accession: I56314
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: mRNA
A;Residues: 1-176 <RES>
A;Cross-references: UNIPROT:P01571; UNIPARC:UPI000002C74E; GB:M71246; NID:g184572; PIDN
C;Genetics:
A;Gene: IFNA
C;Superfamily: interferon alpha

  Query Match             91.2%;  Score 785;  DB 2;  Length 176;
  Best Local Similarity   91.0%;  Pred. No. 2.4e-63;
  Matches  151;  Conservative    8;  Mismatches    7;  Indels    0;  Gaps    0;
```

```
Qy          2 CDLPQTHSLGNRRALILLAQMRRISPFSCLKDRHDFGFPQEEFDGNQFQKAQAISVLHEM 61
              ||||||||||||||||||||| |||||||||||||| |||||||||||| |||||||||
Db         11 CDLPQTHSLGNRRALILLAQMGRISPFSCLKDRHDFGLPQEEFDGNQFQKTQAISVLHEM 70

Qy         62 IQQTFNLFSTKDSSAAWDESLLEKFYTELYQQLNDLEACVIQEVGVEETPLMNVDSILAV 121
              ||||||||||:||||||::|||||| |||||||:||||||||||:||||||| ||||||
Db         71 IQQTFNLFSTEDSSAAWEQSLLEKFSTELYQQLNNLEACVIQEVGMEETPLMNEDSILAV 130

Qy        122 KKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSLSTNLQERLRRKE 167
              :|||||||||||||||||||||||||||||| | |||||:|||||:
Db        131 RKYFQRITLYLTEKKYSPCAWEVVRAEIMRSLSFSTNLQKRLRRKD 176


RESULT 10
I51970
interferon precursor - human
C;Species: Homo sapiens (man)
C;Date: 02-Jul-1996 #sequence_revision 02-Jul-1996 #text_change 16-Jul-1999
C;Accession: I51970
R;Saveliev, V.I.; Zlochevsky, M.L.; Sorokin, A.V.; Naroditskaya, V.A.; Bolotin, A.P.; De
Antibiot. Med. Biotekhnol. 31, 592-596, 1986
A;Title: [Cloning and the determination of the nucleotide sequences in 2 genes of human
A;Reference number: I51970; MUID:87024453; PMID:3767336
A;Accession: I51970
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: mRNA
A;Residues: 1-189 <RES>
A;Cross-references: UNIPARC:UPI000016AB15; GB:M38289; NID:g186407; PIDN:AAA59165.1; PID:
C;Genetics:
A;Gene: IFNA
C;Superfamily: interferon alpha

  Query Match             90.6%;  Score 780;  DB 2;  Length 189;
  Best Local Similarity   90.4%;  Pred. No. 7.4e-63;
  Matches  150;  Conservative    8;  Mismatches    8;  Indels    0;  Gaps    0;

Qy          2 CDLPQTHSLGNRRALILLAQMRRISPFSCLKDRHDFGFPQEEFDGNQFQKAQAISVLHEM 61
              ||||||||||||||||||||| |||||||||||||| |||||||||||| ||| |||||
Db         24 CDLPQTHSLGNRRALILLAQMGRISPFSCLKDRHDFGLPQEEFDGNQFQKTQAIPVLHEM 83

Qy         62 IQQTFNLFSTKDSSAAWDESLLEKFYTELYQQLNDLEACVIQEVGVEETPLMNVDSILAV 121
              ||||||||||:||||||::|||||| |||||||:||||||||||:||||||| ||||||
Db         84 IQQTFNLFSTEDSSAAWEQSLLEKFSTELYQQLNNLEACVIQEVGMEETPLMNEDSILAV 143

Qy        122 KKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSLSTNLQERLRRKE 167
              :|||||||||||||||||||||||||||||| | |||||:|||||:
Db        144 RKYFQRITLYLTEKKYSPCAWEVVRAEIMRSLSFSTNLQKRLRRKD 189


RESULT 11
IVHUA5
interferon alpha-5 precursor - human
C;Species: Homo sapiens (man)
C;Date: 01-Sep-1981 #sequence_revision 01-Sep-1981 #text_change 09-Jul-2004
C;Accession: A60937; A01830
R;Bartholomew, C.; Windass, J.D.
J. Interferon Res. 9, 407-417, 1989
A;Title: Identification of a functional allele of a human interferon-alpha gene previous
A;Reference number: A60937; MUID:89328015; PMID:2526839
A;Accession: A60937
A;Molecule type: DNA
A;Residues: 1-189 <BAR>
A;Cross-references: UNIPROT:P01566; UNIPARC:UPI0000047765
A;Note: this genomic sequence, SMTIII.1A, encodes a functional allele for alpha interfer
ence and is a pseudogene
R;Goeddel, D.V.; Leung, D.W.; Dull, T.J.; Gross, M.; Lawn, R.M.; McCandliss, R.; Seeburg
Nature 290, 20-26, 1981
A;Title: The structure of eight distinct cloned human leukocyte interferon cDNAs.
A;Reference number: A93249; MUID:81148795; PMID:6163083
A;Accession: A01830
A;Molecule type: mRNA
A;Residues: 1-189 <GOE>
A;Cross-references: UNIPARC:UPI0000047765; GB:V00551; GB:J00209; NID:g32748; PIDN:CAA238
A;Note: eight classes of interferon alpha clones were identified; this sequence is deriv
C;Genetics:
A;Gene: GDB:IFNA5
A;Cross-references: GDB:136362; OMIM:147565
A;Map position: 9p22-9p22
C;Superfamily: interferon alpha
C;Keywords: leukocyte
F;1-23/Domain: signal sequence #status predicted <SIG>
F;24-189/Product: interferon alpha-5 #status predicted <MAT>
F;24-122,52-162/Disulfide bonds: #status predicted

  Query Match             90.1%;  Score 776;  DB 1;  Length 189;
  Best Local Similarity   90.4%;  Pred. No. 1.7e-62;
  Matches  150;  Conservative    7;  Mismatches    9;  Indels    0;  Gaps    0;

Qy          2 CDLPQTHSLGNRRALILLAQMRRISPFSCLKDRHDFGFPQEEFDGNQFQKAQAISVLHEM 61
              |||||||||||||||| || |||||||||||||  ||||||||||||||||||||||
Db         24 CDLPQTHSLGNRRALILLGQMGRISPFSCLKDRHDFRIPQEEFDGNQFQKAQAISVLHEM 83

Qy         62 IQQTFNLFSTKDSSAAWDESLLEKFYTELYQQLNDLEACVIQEVGVEETPLMNVDSILAV 121
              ||||||||||:||||||::|||||| |||||||||||||||||||||||||||| ||||||
Db         84 IQQTFNLFSTEDSSAAWEQSLLEKFSTELYQQLNDLEACVIQEVGVEETPLMNEDSILAV 143

Qy        122 KKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSLSTNLQERLRRKE 167
              :|||||||||| |:|||||||||||||||| | |||||:|||||:
Db        144 RKYFQRITLYLIERKYSPCAWEVVRAEIMRSLSFSTNLQKRLRRKD 189


RESULT 12
IVHU14
interferon alpha-I-14 precursor [validated] - human
N;Alternate names: HuIFN-alpha-I-14; lambda-2-h; type I interferon
C;Species: Homo sapiens (man)
C;Date: 01-Sep-1981 #sequence_revision 01-Sep-1981 #text_change 09-Jul-2004
C;Accession: A92916; A94255; B93249; PC2203; A01834; C23753
R;Henco, K.; Brosius, J.; Fujisawa, A.; Fujisawa, J.I.; Haynes, J.R.; Hochstadt, J.; Kov
J. Mol. Biol. 185, 227-260, 1985
A;Title: Structural relationship of human interferon alpha genes and pseudogenes.
A;Reference number: A92916; MUID:86037205; PMID:4057246
A;Accession: A92916
A;Molecule type: DNA
A;Residues: 1-189 <HEN>
A;Cross-references: UNIPROT:P01570; UNIPARC:UPI00000541D5; GB:X02959; NID:g32650; PIDN:(
R;Lawn, R.M.; Adelman, J.; Dull, T.J.; Gross, M.; Goeddel, D.; Ullrich, A.
Science 212, 1159-1162, 1981
A;Title: DNA sequence of two closely linked human leukocyte interferon genes.
A;Reference number: A94255; MUID:81201124; PMID:6165082
A;Accession: A94255
A;Molecule type: DNA
A;Residues: 1-189 <LAW>
A;Cross-references: UNIPARC:UPI00000541D5; GB:V00533; GB:J00215; NID:g32635; PIDN:CAA23
R;Goeddel, D.V.; Leung, D.W.; Dull, T.J.; Gross, M.; Lawn, R.M.; McCandliss, R.; Seeburg
Nature 290, 20-26, 1981
A;Title: The structure of eight distinct cloned human leukocyte interferon cDNAs.
A;Reference number: A93249; MUID:81148795; PMID:6163083
A;Accession: B93249
A;Molecule type: mRNA
A;Residues: 1-174,'F',176-189 <GOE>
A;Cross-references: UNIPARC:UPI0000047764; GB:V00542; GB:J00214; NID:g32720; PIDN:CAA23
A;Note: a variant sequence differs from that shown in having 175-Phe, 182-Lys, and 184-(
R;Shirono, H.; Koga, J.; Uemura, H.; Matsuo, A.
Biosci. Biotechnol. Biochem. 58, 1714-1715, 1994
A;Title: Identification of glycosylated subtypes of interferon-alpha produced by human
A;Reference number: PC2203; MUID:95036878; PMID:7765487
A;Accession: PC2203
A;Molecule type: protein
A;Residues: 'X',25-43 <SHI>
A;Cross-references: UNIPARC:UPI000017365E
A;Experimental source: leukocyte
C;Genetics:
A;Gene: GDB:IFNA14
A;Cross-references: GDB:136356; OMIM:147579
A;Map position: 9p22-9p22
```

```
C;Superfamily: interferon alpha
C;Keywords: antiviral; glycoprotein
F;1-23/Domain: signal sequence #status predicted <SIG>
F;24-189/Product: interferon alpha-I-14 #status experimental <MAT>
F;24-122,52-162/Disulfide bonds: #status predicted
F;25,95/Binding site: carbohydrate (Asn) (covalent) #status predicted

  Query Match             89.2%;  Score 768;  DB 1;  Length 189;
  Best Local Similarity   88.6%;  Pred. No. 8.8e-62;
  Matches  147;  Conservative   10;  Mismatches    9;  Indels    0;  Gaps    0;

Qy          2 CDLPQTHSLGNRRALILLAQMRRISPFSCLKDRHDFGFPQEEFDGNQFQKAQAISVLHEM 61
              |:| ||||| ||| |:|:||||||||||||||||| ||||||||||||||||||||||
Db         24 CNLSQTHSLNNRRTLMLMAQMRRISPFSCLKDRHDFEFPQEEFDGNQFQKAQAISVLHEM 83

Qy         62 IQQTFNLFSTKDSSAAWDESLLEKFYTELYQQLNDLEACVIQEVGVEETPLMNVDSILAV 121
              :|||||||||:|||||||:|||||| ||:||:|||||||||||||||||||| ||||||
Db         84 MQQTFNLFSTKNSSAAWDETLLEKFYIELFQQMNDLEACVIQEVGVEETPLMNEDSILAV 143

Qy        122 KKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSLSTNLQERLRRKE 167
              |||||||||| |||||||||||||||||| | |||||:|||||:
Db        144 KKYFQRITLYLMEKKYSPCAWEVVRAEIMRSLSFSTNLQKRLRRKD 189


RESULT 13
IVHUA9
interferon alpha-17 precursor - human
N;Alternate names: interferon alpha-9; interferon alpha-I'
C;Species: Homo sapiens (man)
C;Date: 01-Sep-1981 #sequence_revision 01-Sep-1981 #text_change 09-Jul-2004
C;Accession: A01835; A22255; C42753
R;Lawn, R.M.; Adelman, J.; Dull, T.J.; Gross, M.; Goeddel, D.; Ullrich, A.
Science 212, 1159-1162, 1981
A;Title: DNA sequence of two closely linked human leukocyte interferon genes.
A;Reference number: A94255; MUID:81201124; PMID:6165082
A;Accession: A01835
A;Molecule type: DNA
A;Residues: 1-189 <LAW>
A;Cross-references: UNIPROT:P01571; UNIPARC:UPI0000141F4B; GB:J00216; GB:V00532; NID:g32
R;Mizoguchi, J.; Pitha, P.M.; Raj, N.B.K.
DNA 4, 221-232, 1985
A;Title: Efficient expression in Escherichia coli of two species of human interferon-alp
A;Reference number: A22255; MUID:85229953; PMID:3891272
A;Accession: A22255
A;Molecule type: mRNA
A;Residues: 1-56,'H',58-189 <MIZ>
A;Cross-references: UNIPARC:UPI0000052AF9; GB:M11026; NID:g184612; PIDN:AAA52725.1; PID:
R;Zoon, K.C.; Miller, D.; Bekisz, J.; zur Nedden, D.; Enterline, J.C.; Nguyen, N.Y.; Hu,
J. Biol. Chem. 267, 15210-15216, 1992
A;Title: Purification and characterization of multiple components of human lymphoblastoi
A;Reference number: A42753; MUID:92340576; PMID:1634550
A;Accession: C42753
A;Molecule type: protein
A;Residues: 'X',25-50,'XX',53-56 <ZOO>
A;Cross-references: UNIPARC:UPI000017365F
C;Genetics:
A;Gene: GDB:IFNA17
A;Cross-references: GDB:136358; OMIM:147583
A;Map position: 9p22-9p22
C;Superfamily: interferon alpha
C;Keywords: leukocyte
F;1-23/Domain: signal sequence #status predicted <SIG>
F;24-189/Product: interferon alpha-17 #status predicted <MAT>
F;24-122,52-162/Disulfide bonds: #status predicted

  Query Match             89.1%;  Score 767;  DB 1;  Length 189;
  Best Local Similarity   89.8%;  Pred. No. 1.1e-61;
  Matches  149;  Conservative    8;  Mismatches    9;  Indels    0;  Gaps    0;

Qy          2 CDLPQTHSLGNRRALILLAQMRRISPFSCLKDRHDFGFPQEEFDGNQFQKAQAISVLHEM 61
              |||||||||||||||||||| |||||||||| ||| |||||||||||| ||||||||
Db         24 CDLPQTHSLGNRRALILLAQMGRISPFSCLKDRPDFGLPQEEFDGNQFQKTQAISVLHEM 83

Qy         62 IQQTFNLFSTKDSSAAWDESLLEKFYTELYQQLNDLEACVIQEVGVEETPLMNVDSILAV 121
              |||||||||:||||||::|||||| |||||||||||||||||||||||| | ||||
Db         84 IQQTFNLFSTEDSSAAWEQSLLEKFSTELYQQLNDLEACVIQEVGVEETPLMNEDFILAV 143

Qy        122 KKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSLSTNLQERLRRKE 167
              :|||||||||||||||||||||||||||||||| |||:: ||||:
Db        144 RKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSFSTNLKKGLRRKD 189


RESULT 15
F25843
interferon alpha-J - human
N;Alternate names: human leukocyte interferon (IFN)
C;Species: Homo sapiens (man)
C;Date: 16-Aug-1988 #sequence_revision 16-Aug-1988 #text_change 15-Jun-1996
C;Accession: F25843
R;Ohara, O.; Teraoka, H.
FEBS Lett. 211, 78-82, 1987
A;Title: Anomalous behavior of human leukocyte interferon subtypes on polyacrylamide gel
A;Reference number: A91374; MUID:87105954; PMID:3803589
A;Accession: F25843
A;Status: nucleic acid sequence not shown; not compared with conceptual translation
A;Molecule type: mRNA
A;Residues: 1-167 <OHA>
A;Cross-references: UNIPARC:UPI0000176718
C;Superfamily: interferon alpha

  Query Match             88.2%;  Score 759;  DB 2;  Length 167;
  Best Local Similarity   88.0%;  Pred. No. 4.9e-61;
  Matches  147;  Conservative   10;  Mismatches   10;  Indels    0;  Gaps    0;

Qy          1 MCDLPQTHSLGNRRALILLAQMRRISPFSCLKDRHDFGFPQEEFDGNQFQKAQAISVLHE 60
              |||||||||| |||||||||| ||||||||||:| ||:|||||:|||| ||||||||
Db          1 MCDLPQTHSLRNRRALILLAQMGRISPFSCLKDRHEFRFPEEEFDGHQFQKTQAISVLHE 60

Qy         61 MIQQTFNLFSTKDSSAAWDESLLEKFYTELYQQLNDLEACVIQEVGVEETPLMNVDSILA 120
              ||||||||||:|||||::|||||| |||||||||||||||||||||||| | |||
Db         61 MIQQTFNLFSTEDSSAAWEQSLLEKFSTELYQQLNDLEACVIQEVGVEETPLMNEDFILA 120
```

```
Qy        121 VKKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSLSTNLQERLRRKE 167
              |:|||||||||| |||||||||||||||||||| ||||:: ||||:
Db        121 VRKYFQRITLYLMEKKYSPCAWEVVRAEIMRSFSFSTNLKKGLRRKD 167
```

Search completed: September 1, 2006, 13:27:57
Job time : 39 secs

Protein Sequence Searches - February 2005

All of the sequence databases on ABSS have recently been updated.

- Please note that the curators of the UniProt database have purged some temporary accession numbers from the most recent version of UniProt. These sequences have been assigned new permanent accession numbers. The new UniProt record may not contain the previous temporary accession number.

- If you encounter an accession number from an older search run against UniProt (results file extension **.rup**) that can no longer be found in the database, the permanent record with the new accession number can be found by searching the old accession number in the UniProt Protein Archive database (UniPARC) at:

  http://www.pir.uniprot.org/database/archive.shtml

If you have any questions regarding this information or your results, please contact any STIC searcher.

When submitting sequence search results for scanning into IFW, please include a copy of this attachment to assist any future Examiners or members of the public who may encounter UniProt temporary accession numbers.

GenCore version 5.1.9

OM protein - protein search, using sw model

Run on: September 1, 2006, 13:19:08 ; Search time 298 Seconds
(without alignments)
518.381 Million cell updates/sec

Title: US-10-650-365A-2
Perfect score: 861
Sequence: 1 MCDLPQTHSLGNRRALILLA.....EIMRSFSLSTNLQERLRRKE 167

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 2849598 seqs, 925015592 residues

Total number of hits satisfying chosen parameters: 2849598

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : UniProt_7.2:*
1: uniprot_sprot:*
2: uniprot_trembl:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	801	93.0	181	2	Q14608_HUMAN	Q14608 homo sapien
2	801	93.0	189	1	IFN21_HUMAN	P01568 homo sapien
3	801	93.0	189	1	IFNA5_HUMAN	P01569 homo sapien
4	801	93.0	189	2	Q52LX3_HUMAN	Q52lx3 homo sapien
5	801	93.0	189	2	Q5VWD1_HUMAN	Q5vwd1 homo sapien
6	786	91.3	189	1	IFNA4_HUMAN	P05014 homo sapien
7	786	91.3	189	2	Q5VV15_HUMAN	Q5vv15 homo sapien
8	777	90.2	189	1	IFN17_HUMAN	P01571 homo sapien
9	777	90.2	189	2	Q5VZ53_HUMAN	Q5vz53 homo sapien
10	776	90.1	189	1	IFN10_HUMAN	P01566 homo sapien
11	776	90.1	189	2	Q5VV13_HUMAN	Q5vv13 homo sapien
12	768	89.2	189	1	IFN14_HUMAN	P01570 homo sapien
13	768	89.2	189	2	Q5VZ56_HUMAN	Q5vz56 homo sapien
14	754	87.6	189	1	IFNA7_HUMAN	P01567 homo sapien
15	754	87.6	189	2	Q5VV14_HUMAN	Q5vv14 homo sapien
16	753	87.5	189	1	IFNA6_HUMAN	P05013 homo sapien
17	753	87.5	189	2	Q5VYQ1_HUMAN	Q5vyq1 homo sapien
18	752.5	87.4	166	2	Q86UP4_HUMAN	Q86up4 homo sapien
19	747.5	86.8	188	2	Q6DJX8_HUMAN	Q6djx8 homo sapien
20	747	86.8	189	1	IFNA1_HUMAN	P01562 homo sapien
21	747	86.8	189	2	Q2M1L8_HUMAN	Q2m1l8 homo sapien
22	747	86.8	189	2	Q52LB8_HUMAN	Q52lb8 homo sapien
23	744.5	86.5	188	1	IFNA2_HUMAN	P01563 homo sapien
24	744	86.4	189	1	IFN16_HUMAN	P05015 homo sapien
25	744	86.4	189	2	Q5VV12_HUMAN	Q5vv12 homo sapien
26	743	86.3	189	2	Q95J78_SAGOE	Q95j78 saguinus oe
27	738	85.7	189	2	Q14618_HUMAN	Q14618 homo sapien
28	736	85.5	166	2	Q8WZ68_HUMAN	Q8wz68 homo sapien
29	734	85.2	189	1	IFNA8_HUMAN	P32881 homo sapien
30	734	85.2	189	2	Q5VYQ3_HUMAN	Q5vyq3 homo sapien
31	721	83.7	189	2	Q95J77_SAGOE	Q95j77 saguinus oe
32	699	81.2	174	2	Q8MJT1_SAISC	Q8mjt1 saimiri sci
33	692.5	80.4	154	2	Q6QNB6_HUMAN	Q6qnb6 homo sapien
34	674	78.3	184	1	IFNA4_HORSE	P05006 equus cabal
35	670	77.8	184	1	IFNA2_HORSE	P05004 equus cabal
36	669	77.7	184	1	IFNA1_HORSE	P05003 equus cabal
37	669	77.7	184	1	IFNA3_HORSE	P05005 equus cabal
38	643	74.7	166	2	Q5U8T2_PIG	Q5u8t2 sus scrofa
39	638	74.1	166	2	Q5U8T1_PIG	Q5u8t1 sus scrofa
40	629	73.1	189	2	Q304W3_PIG	Q304w3 sus scrofa
41	628	72.9	189	1	IFNA1_PIG	P49879 sus scrofa
42	628	72.9	189	2	Q304V9_PIG	Q304v9 sus scrofa
43	625	72.6	166	2	Q5U8T3_PIG	Q5u8t3 sus scrofa
44	625	72.6	189	2	Q6VAB8_PIG	Q6vab8 sus scrofa
45	622	72.2	166	2	Q7YRK9_PIG	Q7yrk9 sus scrofa

ALIGNMENTS

RESULT 1
Q14608_HUMAN
ID Q14608_HUMAN PRELIMINARY; PRT; 181 AA.
AC Q14608;
DT 01-NOV-1996, integrated into UniProtKB/TrEMBL.
DT 01-NOV-1996, sequence version 1.
DT 21-FEB-2006, entry version 27.
DE Leukocyte interferon-alpha.
OS Homo sapiens (Human).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Hominidae;
OC Homo.
OX NCBI_TaxID=9606;
RN [1]
RP NUCLEOTIDE SEQUENCE.
RX MEDLINE=85056523; PubMed=6548765;
RA Gren E., Berzin V.M., Jansone I., Tsimanis A., Vishnevsky Y.,
RA Apsalons U.;
RT "Novel human leukocyte interferon subtype and structural comparison of
RT alpha interferon genes.";
RL J. Interferon Res. 4:609-617(1984).
RN [2]
RP NUCLEOTIDE SEQUENCE.
RX MEDLINE=87105954; PubMed=3803589; DOI=10.1016/0014-5793(87)81278-4;
RA Ohara O., Teraoka H.;
RT "Anomalous behavior of human leukocyte interferon subtypes on
RT polyacrylamide gel electrophoresis in the presence of dodecyl
RT sulfate.";
RL FEBS Lett. 211:78-82(1987).
CC -!- SUBCELLULAR LOCATION: Secreted protein (By similarity).
CC ---
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CC ---
DR EMBL; M28586; AAA36041.1; -; mRNA.
DR PIR; E25843; E25843.
DR PIR; I56313; I56313.
DR HSSP; P01563; 1ITF.
DR SMR; Q14608; 16-181.
DR Ensembl; ENSG00000137080; Homo sapiens.
DR GO; GO:0005615; C:extracellular space; IEA.
DR GO; GO:0005126; F:hematopoietin/interferon-class (D200-domain. . .; IEA.
DR GO; GO:0006952; P:defense response; IEA.
DR GO; GO:0009615; P:response to virus; IEA.
DR InterPro; IPR000471; Interferon_abd.
DR PANTHER; PTHR11691; Interferon_abd; 1.
DR Pfam; PF00143; Interferon; 1.
DR PRINTS; PR00266; INTERFERONAB.
DR ProDom; PD000550; Interferon_abd; 1.
DR SMART; SM00076; IFabd; 1.
DR PROSITE; PS00252; INTERFERON_A_B_D; 1.
KW Antiviral defense; Cytokine.
SQ SEQUENCE 181 AA; 20878 MW; 3DB45120764EBABC CRC64;

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  Query Match             93.0%;  Score 801;  DB 2;  Length 181;
  Best Local Similarity   94.6%;  Pred. No. 1.1e-60;
  Matches  157;  Conservative    2;  Mismatches    7;  Indels    0;  Gaps    0;

Qy          2 CDLPQTHSLGNRRALILLAQMRRISPFSCLKDRHDFGFPQEEFDGNQFQKAQAISVLHEM 61
              |||||||||||||||||||| ||||||||||||||||||||||||||||||||||||||
Db         16 CDLPQTHSLGNRRALILLAQMGRISPFSCLKDRHDFGFPQEEFDGNQFQKAQAISVLHEM 75

Qy         62 IQQTFNLFSTKDSSAAWDESLLEKFYTELYQQLNDLEACVIQEVGVEETPLMNVDSILAV 121
              ||||||||||||| |::|||||| ||| ||||||||||||||||||||||||||||||
Db         76 IQQTFNLFSTKDSSATWEQSLLEKFSTELNQQLNDLEACVIQEVGVEETPLMNVDSILAV 135

Qy        122 KKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSLSTNLQERLRRKE 167
              |||||||||||||||||||||||||||||||||   ||||||||
Db        136 KKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSLSKIFQERLRRKE 181


RESULT 2
IFN21_HUMAN
ID   IFN21_HUMAN    STANDARD;      PRT;   189 AA.
AC   P01568;
DT   21-JUL-1986, integrated into UniProtKB/Swiss-Prot.
DT   16-APR-2002, sequence version 2.
DT   07-FEB-2006, entry version 62.
DE   Interferon alpha-21 precursor (Interferon alpha-F) (LeIF F).
GN   Name=IFNA21;
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Hominidae;
OC   Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   NUCLEOTIDE SEQUENCE [MRNA].
RX   MEDLINE=81148795; PubMed=6163083;
RA   Goeddel D.V., Leung D.W., Dull T.J., Gross M., Lawn R.M.,
RA   McCandliss R., Seeburg P.H., Ullrich A., Yelverton E., Gray P.W.;
RT   "The structure of eight distinct cloned human leukocyte interferon
RT   cDNAs.";
RL   Nature 290:20-26(1981).
RN   [2]
RP   NUCLEOTIDE SEQUENCE [MRNA].
RA   Gren E.Y., Berzin V.M., Tsimanis A.Y., Apsalon U.R., Vishnevskii Y.I.,
RA   Yansone I.V., Dishler A.V., Pudova N.V., Smorodintsev A.A.,
RA   Iovlev V.I., Stepanov A.N., Feldmane G.Y., Meldrais Y.A., Lozha V.P.,
RA   Kavsan V.M., Efimov V.A., Sverdlov E.D.;
RT   "A new type of leukocytic interferon.";
RL   Dokl. Biochem. 269:91-95(1983).
RN   [3]
RP   NUCLEOTIDE SEQUENCE [LARGE SCALE MRNA].
RX   MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;
RA   Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
RA   Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
RA   Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
RA   Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
RA   Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RA   Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
RA   Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,
RA   Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
RA   Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
RA   Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RA   Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
RA   Fahey J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A.,
RA   Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
RA   Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
RA   Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
RA   Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smailus D.E.,
RA   Schnerch A., Schein J.E., Jones S.J.M., Marra M.A.;
RT   "Generation and initial analysis of more than 15,000 full-length human
RT   and mouse cDNA sequences.";
RL   Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
RN   [4]
RP   PROTEIN SEQUENCE OF 24-58.
RX   MEDLINE=98087498; PubMed=9425112;
RA   Nyman T.A., Toeloe H., Parkkinen J., Kalkkinen N.;
RT   "Identification of nine interferon-alpha subtypes produced by Sendai
RT   virus-induced human peripheral blood leucocytes.";
RL   Biochem. J. 329:295-302(1998).
RN   [5]
RP   ABSENCE OF POLYMORPHISM.
RX   MEDLINE=97067358; PubMed=8910771;
RA   Hussain M., Gill D.S., Liao M.-J.;
RT   "Identification of interferon-alpha 7, -alpha 14, and -alpha 21
RT   variants in the genome of a large human population.";
RL   J. Interferon Cytokine Res. 16:853-859(1996).
CC   -!- FUNCTION: Produced by macrophages, IFN-alpha have antiviral
CC       activities. Interferon stimulates the production of two enzymes: a
CC       protein kinase and an oligoadenylate synthetase.
CC   -!- SUBCELLULAR LOCATION: Secreted protein.
CC   -!- SIMILARITY: Belongs to the alpha/beta interferon family.
CC   ----------------------------------------------------------------------
CC   Copyrighted by the UniProt Consortium, see http://www.uniprot.org/terms
CC   Distributed under the Creative Commons Attribution-NoDerivs License
CC   ----------------------------------------------------------------------
DR   EMBL; M12350; AAA52718.1; -; mRNA.
DR   EMBL; V00540; CAA23801.1; -; mRNA.
DR   EMBL; X00145; CAA24980.1; -; mRNA.
DR   EMBL; BC069329; AAH69329.1; -; mRNA.
DR   EMBL; BC069372; AAH69372.1; -; mRNA.
DR   EMBL; BC069408; AAH69408.1; -; mRNA.
DR   PIR; A01832; IVHUF.
DR   PIR; I84464; I84464.
DR   HSSP; P01563; 1ITF.
DR   SMR; P01568; 24-189.
DR   Ensembl; ENSG00000137080; Homo sapiens.
DR   HGNC; HGNC:5424; IFNA21.
DR   MIM; 147584; gene.
DR   LinkHub; P01568; -.
DR   GO; GO:0005126; F:hematopoietin/interferon-class (D200-domain. . .; TAS.
DR   InterPro; IPR000471; Interferon_abd.
DR   PANTHER; PTHR11691; Interferon_abd; 1.
DR   Pfam; PF00143; Interferon; 1.
DR   PRINTS; PR00266; INTERFERONAB.
DR   ProDom; PD000550; Interferon_abd; 1.
DR   SMART; SM00076; IFabd; 1.
DR   PROSITE; PS00252; INTERFERON_A_B_D; 1.
KW   Antiviral defense; Cytokine; Direct protein sequencing; Signal.
FT   SIGNAL       1     23
FT   CHAIN       24    189       Interferon alpha-21.
FT                               /FTId=PRO_0000016370.
FT   DISULFID     24    122       By similarity.
FT   DISULFID     52    162       By similarity.
FT   CONFLICT    119    119       L -> M (in Ref. 1).
SQ   SEQUENCE   189 AA;  21741 MW;  F0B6C9C392905802 CRC64;

  Query Match             93.0%;  Score 801;  DB 1;  Length 189;
  Best Local Similarity   94.6%;  Pred. No. 1.2e-60;
  Matches  157;  Conservative    2;  Mismatches    7;  Indels    0;  Gaps    0;

Qy          2 CDLPQTHSLGNRRALILLAQMRRISPFSCLKDRHDFGFPQEEFDGNQFQKAQAISVLHEM 61
              |||||||||||||||||||| ||||||||||||||||||||||||||||||||||||||
Db         24 CDLPQTHSLGNRRALILLAQMGRISPFSCLKDRHDFGFPQEEFDGNQFQKAQAISVLHEM 83

Qy         62 IQQTFNLFSTKDSSAAWDESLLEKFYTELYQQLNDLEACVIQEVGVEETPLMNVDSILAV 121
              ||||||||||||| |::|||||| ||| ||||||||||||||||||||||||||||||
Db         84 IQQTFNLFSTKDSSATWEQSLLEKFSTELNQQLNDLEACVIQEVGVEETPLMNVDSILAV 143

Qy        122 KKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSLSTNLQERLRRKE 167
              |||||||||||||||||||||||||||||||||   ||||||||
Db        144 KKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSLSKIFQERLRRKE 189


RESULT 3
IFNA5_HUMAN
ID   IFNA5_HUMAN    STANDARD;      PRT;   189 AA.
AC   P01569;
DT   21-JUL-1986, integrated into UniProtKB/Swiss-Prot.
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DT   13-AUG-1987, sequence version 1.
DT   07-FEB-2006, entry version 57.
DE   Interferon alpha-5 precursor (Interferon alpha-G) (LeIF G) (Interferon
DE   alpha-61).
GN   Name=IFNA5;
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Hominidae;
OC   Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   NUCLEOTIDE SEQUENCE.
RX   MEDLINE=86037205; PubMed=4057246;
RA   Henco K., Brosius J., Fujisawa A., Fujisawa J., Haynes J.R.,
RA   Hochstadt J., Kovacic T., Pasek M., Schamboeck A., Schmid J.,
RA   Todokoro K., Waelchli M., Nagata S., Weissmann C.;
RT   "Structural relationship of human interferon alpha genes and
RT   pseudogenes.";
RL   J. Mol. Biol. 185:227-260(1985).
RN   [2]
RP   NUCLEOTIDE SEQUENCE [LARGE SCALE GENOMIC DNA].
RX   PubMed=15164053; DOI=10.1038/nature02465;
RA   Humphray S.J., Oliver K., Hunt A.R., Plumb R.W., Loveland J.E.,
RA   Howe K.L., Andrews T.D., Searle S., Hunt S.E., Scott C.E., Jones M.C.,
RA   Ainscough R., Almeida J.P., Ambrose K.D., Ashwell R.I.S.,
RA   Babbage A.K., Babbage S., Bagguley C.L., Bailey J., Banerjee R.,
RA   Barker D.J., Barlow K.F., Bates K., Beasley H., Beasley O., Bird C.P.,
RA   Bray-Allen S., Brown A.J., Brown J.Y., Burford D., Burrill W.,
RA   Burton J., Carder C., Carter N.P., Chapman J.C., Chen Y., Clarke G.,
RA   Clark S.Y., Clee C.M., Clegg S., Collier R.E., Corby N., Crosier M.,
RA   Cummings A.T., Davies J., Dhami P., Dunn M., Dutta I., Dyer L.W.,
RA   Earthrowl M.E., Faulkner L., Fleming C.J., Frankish A.,
RA   Frankland J.A., French L., Fricker D.G., Garner P., Garnett J.,
RA   Ghori J., Gilbert J.G.R., Glison C., Grafham D.V., Gribble S.,
RA   Griffiths C., Griffiths-Jones S., Grocock R., Guy J., Hall R.E.,
RA   Hammond S., Harley J.L., Harrison E.S.I., Hart E.A., Heath P.D.,
RA   Henderson C.D., Hopkins B.L., Howard P.J., Howden P.J., Huckle E.,
RA   Johnson C., Johnson D., Joy A.A., Kay M., Keenan S., Kershaw J.K.,
RA   Kimberley A.M., King A., Knights A., Laird G.K., Langford C.,
RA   Lawlor S., Leongamornlert D.A., Leversha M., Lloyd C., Lloyd D.M.,
RA   Lovell J., Martin S., Mashreghi-Mohammadi M., Matthews L., McLaren S.,
RA   McLay K.E., McMurray A., Milne S., Nickerson T., Nisbett J.,
RA   Nordsiek G., Pearce A.V., Peck A.I., Porter K.M., Pandian R.,
RA   Pelan S., Phillimore B., Povey S., Ramsey Y., Rand V., Scharfe M.,
RA   Sehra H.K., Shownkeen R., Sims S.K., Skuce C.D., Smith M.,
RA   Steward C.A., Swarbreck D., Sycamore N., Tester J., Thorpe A.,
RA   Tracey A., Tromans A., Thomas D.W., Wall M., Wallis J.M., West A.P.,
RA   Whitehead S.L., Willey D.L., Williams S.A., Wilming L., Wray P.W.,
RA   Young L., Ashurst J.L., Coulson A., Blocker H., Durbin R.,
RA   Sulston J.E., Hubbard T., Jackson M.J., Bentley D.R., Beck S.,
RA   Rogers J., Dunham I.;
RT   "DNA sequence and analysis of human chromosome 9.";
RL   Nature 429:369-374(2004).
RN   [3]
RP   NUCLEOTIDE SEQUENCE OF 57-189.
RC   TISSUE=Spleen;
RX   MEDLINE=81148795; PubMed=6163083;
RA   Goeddel D.V., Leung D.W., Dull T.J., Gross M., Lawn R.M.,
RA   McCandliss R., Seeburg P.H., Ullrich A., Yelverton E., Gray P.W.;
RT   "The structure of eight distinct cloned human leukocyte interferon
RT   cDNAs.";
RL   Nature 290:20-26(1981).
RN   [4]
RP   PROTEIN SEQUENCE OF 22-36.
RX   PubMed=15340161; DOI=10.1110/ps.04682504;
RA   Zhang Z., Henzel W.J.;
RT   "Signal peptide prediction based on analysis of experimentally
RT   verified cleavage sites.";
RL   Protein Sci. 13:2819-2824(2004).
CC   -!- FUNCTION: Produced by macrophages, IFN-alpha have antiviral
CC       activities. Interferon stimulates the production of two enzymes: a
CC       protein kinase and an oligoadenylate synthetase.
CC   -!- SUBCELLULAR LOCATION: Secreted protein.
CC   -!- SIMILARITY: Belongs to the alpha/beta interferon family.
CC   ----------------------------------------------------------------------
CC   Copyrighted by the UniProt Consortium, see http://www.uniprot.org/terms
CC   Distributed under the Creative Commons Attribution-NoDerivs License
CC   ----------------------------------------------------------------------
DR   EMBL; X02956; CAA26702.1; -; Genomic_DNA.
DR   EMBL; AL162420; CAH73189.1; -; Genomic_DNA.
DR   EMBL; V00541; CAA23802.1; -; mRNA.
DR   PIR; S43716; IVHUA7.
DR   HSSP; P01563; 1ITF.
DR   SMR; P01569; 24-189.
DR   Ensembl; ENSG00000147873; Homo sapiens.
DR   HGNC; HGNC:5426; IFNA5.
DR   MIM; 147565; gene.
DR   LinkHub; P01569; -.
DR   GO; GO:0005126; F:hematopoietin/interferon-class (D200-domain. . .; TAS.
DR   InterPro; IPR000471; Interferon_abd.
DR   PANTHER; PTHR11691; Interferon_abd; 1.
DR   Pfam; PF00143; Interferon; 1.
DR   PRINTS; PR00266; INTERFERONAB.
DR   ProDom; PD000550; Interferon_abd; 1.
DR   SMART; SM00076; IFabd; 1.
DR   PROSITE; PS00252; INTERFERON_A_B_D; 1.
KW   Antiviral defense; Cytokine; Direct protein sequencing; Signal.
FT   SIGNAL        1     21
FT   CHAIN        22    189       Interferon alpha-5.
FT                                 /FTId=PRO_0000016362.
FT   DISULFID     24    122       By similarity.
FT   DISULFID     52    162       By similarity.
SQ   SEQUENCE   189 AA;  21942 MW;  C605992FE2E78043 CRC64;

  Query Match             93.0%;  Score 801;  DB 1;  Length 189;
  Best Local Similarity   91.0%;  Pred. No. 1.2e-60;
  Matches  151;  Conservative    9;  Mismatches    6;  Indels    0;  Gaps    0;

Qy          2 CDLPQTHSLGNRRALILLAQMRRISPFSCLKDRHDFGFPQEEFDGNQFQKAQAISVLHEM 61
              ||||||||| ||| |:::||| ||||||||||||||||||||||||||||||||||||
Db         24 CDLPQTHSLSNRRTLMIMAQMGRISPFSCLKDRHDFGFPQEEFDGNQFQKAQAISVLHEM 83

Qy         62 IQQTFNLFSTKDSSAAWDESLLEKFYTELYQQLNDLEACVIQEVGVEETPLMNVDSILAV 121
              |||||||||||||| ||||:||:|||||||||||||::||||||:|||||||||| |
Db         84 IQQTFNLFSTKDSSATWDETLLDKFYTELYQQLNDLEACMMQEVGVEDTPLMNVDSILTV 143

Qy        122 KKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSLSTNLQERLRRKE 167
              :|||||||||||||||||||||||||||||||| ||||||||||
Db        144 RKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSLSANLQERLRRKE 189


RESULT 4
Q52LX3_HUMAN
ID   Q52LX3_HUMAN   PRELIMINARY;   PRT;   189 AA.
AC   Q52LX3;
DT   24-MAY-2005, integrated into UniProtKB/TrEMBL.
DT   24-MAY-2005, sequence version 1.
DT   21-FEB-2006, entry version 9.
DE   Interferon, alpha 5.
GN   Name=IFNA5;
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Hominidae;
OC   Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   NUCLEOTIDE SEQUENCE.
RC   TISSUE=Brain;
RX   MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;
RA   Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
RA   Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
RA   Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
RA   Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
RA   Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RA   Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
RA   Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,
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RA   Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
RA   Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
RA   Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RA   Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
RA   Fahey J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A.,
RA   Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
RA   Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
RA   Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
RA   Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smailus D.E.,
RA   Schnerch A., Schein J.E., Jones S.J.M., Marra M.A.;
RT   "Generation and initial analysis of more than 15,000 full-length human
RT   and mouse cDNA sequences.";
RL   Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
RN   [2]
RP   NUCLEOTIDE SEQUENCE.
RC   TISSUE=Brain;
RG   NIH MGC Project;
RL   Submitted (APR-2005) to the EMBL/GenBank/DDBJ databases.
CC   -!- SUBCELLULAR LOCATION: Secreted protein (By similarity).
CC   ---------------------------------------------------------------------
CC   Copyrighted by the UniProt Consortium, see http://www.uniprot.org/terms
CC   Distributed under the Creative Commons Attribution-NoDerivs License
CC   ---------------------------------------------------------------------
DR   EMBL; BC093757; AAH93757.1; -; mRNA.
DR   EMBL; BC093755; AAH93755.1; -; mRNA.
DR   SMR; Q52LX3; 24-189.
DR   Ensembl; ENSG00000147873; Homo sapiens.
DR   GO; GO:0005615; C:extracellular space; IEA.
DR   GO; GO:0005126; F:hematopoietin/interferon-class (D200-domain. . .; IEA.
DR   GO; GO:0006952; P:defense response; IEA.
DR   GO; GO:0009615; P:response to virus; IEA.
DR   InterPro; IPR000471; Interferon_abd.
DR   PANTHER; PTHR11691; Interferon_abd; 1.
DR   Pfam; PF00143; Interferon; 1.
DR   PRINTS; PR00266; INTERFERONAB.
DR   ProDom; PD000550; Interferon_abd; 1.
DR   SMART; SM00076; IFabd; 1.
DR   PROSITE; PS00252; INTERFERON_A_B_D; 1.
KW   Antiviral defense; Cytokine.
SQ   SEQUENCE   189 AA;  21942 MW;  C605992FE2E78043 CRC64;

  Query Match             93.0%;  Score 801;  DB 2;  Length 189;
  Best Local Similarity   91.0%;  Pred. No. 1.2e-60;
  Matches  151;  Conservative    9;  Mismatches    6;  Indels    0;  Gaps    0;

Qy          2 CDLPQTHSLGNRRALILLAQMRRISPFSCLKDRHDFGFPQEEFDGNQFQKAQAISVLHEM 61
              ||||||||| ||| |:::||| |||||||||||||||||||||||||||||||||||||||
Db         24 CDLPQTHSLSNRRTLMIMAQMGRISPFSCLKDRHDFGFPQEEFDGNQFQKAQAISVLHEM 83

Qy         62 IQQTFNLFSTKDSSAAWDESLLEKFYTELYQQLNDLEACVIQEVGVEETPLMNVDSILAV 121
              |||||||||||||| |||:||:||||||||||||||::|||||:|||||||||| |
Db         84 IQQTFNLFSTKDSSATWDETLLDKFYTELYQQLNDLEACMMQEVGVEDTPLMNVDSILTV 143

Qy        122 KKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSLSTNLQERLRRKE 167
              :|||||||||||||||||||||||||||||||| |||||||||
Db        144 RKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSLSANLQERLRRKE 189


RESULT 5
Q5VWD1_HUMAN
ID   Q5VWD1_HUMAN   PRELIMINARY;   PRT;   189 AA.
AC   Q5VWD1;
DT   10-MAY-2005, integrated into UniProtKB/TrEMBL.
DT   10-MAY-2005, sequence version 1.
DT   21-FEB-2006, entry version 10.
DE   Interferon, alpha 21.
GN   Name=IFNA21; ORFNames=RP11-113D19.8-001;
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Hominidae;
OC   Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   NUCLEOTIDE SEQUENCE.
RA   Martin S.;
RL   Submitted (MAY-2005) to the EMBL/GenBank/DDBJ databases.
RN   [2]
RP   NUCLEOTIDE SEQUENCE.
RC   TISSUE=Brain, and PCR rescued clones;
RX   MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;
RA   Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
RA   Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
RA   Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
RA   Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
RA   Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RA   Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
RA   Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,
RA   Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
RA   Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
RA   Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RA   Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
RA   Fahey J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A.,
RA   Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
RA   Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
RA   Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
RA   Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smailus D.E.,
RA   Schnerch A., Schein J.E., Jones S.J.M., Marra M.A.;
RT   "Generation and initial analysis of more than 15,000 full-length human
RT   and mouse cDNA sequences.";
RL   Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
RN   [3]
RP   NUCLEOTIDE SEQUENCE.
RC   TISSUE=Brain;
RG   NIH MGC Project;
RL   Submitted (AUG-2005) to the EMBL/GenBank/DDBJ databases.
RN   [4]
RP   NUCLEOTIDE SEQUENCE.
RC   TISSUE=PCR rescued clones;
RG   NIH MGC Project;
RL   Submitted (MAY-2005) to the EMBL/GenBank/DDBJ databases.
CC   -!- SUBCELLULAR LOCATION: Secreted protein (By similarity).
CC   ---------------------------------------------------------------------
CC   Copyrighted by the UniProt Consortium, see http://www.uniprot.org/terms
CC   Distributed under the Creative Commons Attribution-NoDerivs License
CC   ---------------------------------------------------------------------
DR   EMBL; AL390882; CAH70157.1; -; Genomic_DNA.
DR   EMBL; BC101638; AAI01639.1; -; mRNA.
DR   EMBL; BC101640; AAI01641.1; -; mRNA.
DR   EMBL; BC096699; AAH96699.1; -; mRNA.
DR   SMR; Q5VWD1; 24-189.
DR   Ensembl; ENSG00000137080; Homo sapiens.
DR   GO; GO:0005615; C:extracellular space; IEA.
DR   GO; GO:0005126; F:hematopoietin/interferon-class (D200-domain. . .; IEA.
DR   GO; GO:0006952; P:defense response; IEA.
DR   GO; GO:0009615; P:response to virus; IEA.
DR   InterPro; IPR000471; Interferon_abd.
DR   PANTHER; PTHR11691; Interferon_abd; 1.
DR   Pfam; PF00143; Interferon; 1.
DR   PRINTS; PR00266; INTERFERONAB.
DR   SMART; SM00076; IFabd; 1.
DR   PROSITE; PS00252; INTERFERON_A_B_D; 1.
KW   Antiviral defense; Cytokine.
SQ   SEQUENCE   189 AA;  21741 MW;  F0B6C9C392905802 CRC64;

  Query Match             93.0%;  Score 801;  DB 2;  Length 189;
  Best Local Similarity   94.6%;  Pred. No. 1.2e-60;
  Matches  157;  Conservative    2;  Mismatches    7;  Indels    0;  Gaps    0;

Qy          2 CDLPQTHSLGNRRALILLAQMRRISPFSCLKDRHDFGFPQEEFDGNQFQKAQAISVLHEM 61
              |||||||||||||||||||| |||||||||||||||||||||||||||||||||||||||
Db         24 CDLPQTHSLGNRRALILLAQMGRISPFSCLKDRHDFGFPQEEFDGNQFQKAQAISVLHEM 83

Qy         62 IQQTFNLFSTKDSSAAWDESLLEKFYTELYQQLNDLEACVIQEVGVEETPLMNVDSILAV 121
              |||||||||||||| |::|||||| ||| |||||||||||||||||||||||||||||||
Db         84 IQQTFNLFSTKDSSATWEQSLLEKFSTELNQQLNDLEACVIQEVGVEETPLMNVDSILAV 143
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Qy        122 KKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSLSTNLQERLRRKE 167
              ||||||||||||||||||||||||||||||||||   |||||||
Db        144 KKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSLSKIFQERLRRKE 189


RESULT 6
IFNA4_HUMAN
ID   IFNA4_HUMAN     STANDARD;      PRT;   189 AA.
AC   P05014; P13358;
DT   13-AUG-1987, integrated into UniProtKB/Swiss-Prot.
DT   10-MAY-2005, sequence version 2.
DT   07-FEB-2006, entry version 61.
DE   Interferon alpha-4 precursor (Interferon alpha-4B) (Interferon alpha-
DE   M1) (Interferon alpha-76).
GN   Name=IFNA4;
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Hominidae;
OC   Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   NUCLEOTIDE SEQUENCE, AND VARIANTS ALPHA-4B THR-74 AND VAL-137.
RX   MEDLINE=86037205; PubMed=4057246;
RA   Henco K., Brosius J., Fujisawa A., Fujisawa J., Haynes J.R.,
RA   Hochstadt J., Kovacic T., Pasek M., Schamboeck A., Schmid J.,
RA   Todokoro K., Waelchli M., Nagata S., Weissmann C.;
RT   "Structural relationship of human interferon alpha genes and
RT   pseudogenes.";
RL   J. Mol. Biol. 185:227-260(1985).
RN   [2]
RP   NUCLEOTIDE SEQUENCE.
RX   MEDLINE=84307815; PubMed=6089830;
RA   Linnane A.W., Beilharz M.W., McMullen G.L., Macreadie I.G., Murphy M.,
RA   Nisbet I.T., Novitski C.E., Woodrow G.C.;
RT   "Nucleotide sequence and expression in E. coli of a human interferon-
RT   alpha gene selected from a genomic library using synthetic
RT   oligonucleotides.";
RL   Biochem. Int. 8:725-732(1984).
RN   [3]
RP   NUCLEOTIDE SEQUENCE [LARGE SCALE MRNA], AND VARIANT THR-74.
RX   MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;
RA   Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
RA   Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
RA   Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
RA   Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
RA   Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RA   Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
RA   Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,
RA   Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
RA   Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
RA   Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RA   Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
RA   Fahey J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A.,
RA   Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
RA   Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
RA   Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
RA   Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smailus D.E.,
RA   Schnerch A., Schein J.E., Jones S.J.M., Marra M.A.;
RT   "Generation and initial analysis of more than 15,000 full-length human
RT   and mouse cDNA sequences.";
RL   Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
RN   [4]
RP   PROTEIN SEQUENCE OF 24-56.
RX   MEDLINE=98087498; PubMed=9425112;
RA   Nyman T.A., Toeloe H., Parkkinen J., Kalkkinen N.;
RT   "Identification of nine interferon-alpha subtypes produced by Sendai
RT   virus-induced human peripheral blood leucocytes.";
RL   Biochem. J. 329:295-302(1998).
RN   [5]
RP   POLYMORPHISM.
RX   MEDLINE=97474410; PubMed=9335434;
RA   Hussain M., Gill D.S., Liao M.-J.;
RT   "Both variant forms of interferon-alpha4 gene (IFNA4a and IFNA4b) are
RT   present in the human population.";
RL   J. Interferon Cytokine Res. 17:559-566(1997).
CC   -!- FUNCTION: Produced by macrophages, IFN-alpha have antiviral
CC       activities. Interferon stimulates the production of two enzymes: a
CC       protein kinase and an oligoadenylate synthetase.
CC   -!- SUBCELLULAR LOCATION: Secreted protein.
CC   -!- POLYMORPHISM: Two forms exist; alpha-4a (shown here) and alpha-4b.
CC       They seem to be equally abundant.
CC   -!- SIMILARITY: Belongs to the alpha/beta interferon family.
CC   ----------------------------------------------------------------------
CC   Copyrighted by the UniProt Consortium, see http://www.uniprot.org/terms
CC   Distributed under the Creative Commons Attribution-NoDerivs License
CC   ----------------------------------------------------------------------
DR   EMBL; X02955; CAA26701.1; -; Genomic_DNA.
DR   EMBL; M27318; AAA52726.1; -; mRNA.
DR   EMBL; BC074965; AAH74965.1; -; mRNA.
DR   EMBL; BC074966; AAH74966.1; -; mRNA.
DR   PIR; E23753; IVHU4B.
DR   PIR; I52347; I52347.
DR   HSSP; P01563; 1ITF.
DR   SMR; P05014; 24-189.
DR   Ensembl; ENSG00000147877; Homo sapiens.
DR   HGNC; HGNC:5425; IFNA4.
DR   MIM; 147564; gene.
DR   GO; GO:0005132; F:interferon-alpha/beta receptor binding; TAS.
DR   GO; GO:0009615; P:response to virus; TAS.
DR   InterPro; IPR000471; Interferon_abd.
DR   PANTHER; PTHR11691; Interferon_abd; 1.
DR   Pfam; PF00143; Interferon; 1.
DR   PRINTS; PR00266; INTERFERONAB.
DR   SMART; SM00076; IFabd; 1.
DR   PROSITE; PS00252; INTERFERON_A_B_D; 1.
KW   Antiviral defense; Cytokine; Direct protein sequencing; Polymorphism;
KW   Signal.
FT   SIGNAL       1     23
FT   CHAIN       24    189       Interferon alpha-4.
FT                               /FTId=PRO_0000016361.
FT   DISULFID    24    122       By similarity.
FT   DISULFID    52    162       By similarity.
FT   VARIANT     74     74       A -> T (in alpha-4B; dbSNP:1062571).
FT                               /FTId=VAR_013002.
FT   VARIANT    137    137       E -> V (in alpha-4B; dbSNP:3750480).
FT                               /FTId=VAR_013003.
SQ   SEQUENCE   189 AA;  21808 MW;  828DF9C33ABC337F CRC64;

  Query Match             91.3%;  Score 786;  DB 1;  Length 189;
  Best Local Similarity   91.6%;  Pred. No. 2.3e-59;
  Matches  152;  Conservative    8;  Mismatches    6;  Indels    0;  Gaps    0;

Qy          2 CDLPQTHSLGNRRALILLAQMRRISPFSCLKDRHDFGFPQEEFDGNQFQKAQAISVLHEM 61
              |||||||||||||||||||| ||| |||||||||||||:|||||:|||||||||||||||
Db         24 CDLPQTHSLGNRRALILLAQMGRISHFSCLKDRHDFGFPEEEFDGHQFQKAQAISVLHEM 83

Qy         62 IQQTFNLFSTKDSSAAWDESLLEKFYTELYQQLNDLEACVIQEVGVEETPLMNVDSILAV 121
              ||||||||||:||||||::|||||| ||||||||||||||||||||||||| ||||||
Db         84 IQQTFNLFSTEDSSAAWEQSLLEKFSTELYQQLNDLEACVIQEVGVEETPLMNEDSILAV 143

Qy        122 KKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSLSTNLQERLRRKE 167
              :|||||||||||||||||||||||||||| | |||||:|||||:
Db        144 RKYFQRITLYLTEKKYSPCAWEVVRAEIMRSLSFSTNLQKRLRRKD 189


RESULT 7
Q5VV15_HUMAN
ID   Q5VV15_HUMAN    PRELIMINARY;    PRT;   189 AA.
AC   Q5VV15;
DT   07-DEC-2004, integrated into UniProtKB/TrEMBL.
DT   07-DEC-2004, sequence version 1.
DT   21-FEB-2006, entry version 10.
DE   Interferon, alpha 4.
GN   Name=IFNA4; ORFNames=RP11-1P8.4-001;
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
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OC   Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Hominidae;
OC   Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   NUCLEOTIDE SEQUENCE.
RA   Pelan S.;
RL   Submitted (MAY-2005) to the EMBL/GenBank/DDBJ databases.
CC   -!- SUBCELLULAR LOCATION: Secreted protein (By similarity).
CC   ---------------------------------------------------------------------
CC   Copyrighted by the UniProt Consortium, see http://www.uniprot.org/terms
CC   Distributed under the Creative Commons Attribution-NoDerivs License
CC   ---------------------------------------------------------------------
DR   EMBL; AL512606; CAH71188.1; -; Genomic_DNA.
DR   SMR; Q5VV15; 24-189.
DR   Ensembl; ENSG00000147877; Homo sapiens.
DR   LinkHub; Q5VV15; -.
DR   GO; GO:0005615; C:extracellular space; IEA.
DR   GO; GO:0005126; F:hematopoietin/interferon-class (D200-domain. . .; IEA.
DR   GO; GO:0006952; P:defense response; IEA.
DR   GO; GO:0009615; P:response to virus; IEA.
DR   InterPro; IPR000471; Interferon_abd.
DR   PANTHER; PTHR11691; Interferon_abd; 1.
DR   Pfam; PF00143; Interferon; 1.
DR   PRINTS; PR00266; INTERFERONAB.
DR   ProDom; PD000550; Interferon_abd; 1.
DR   SMART; SM00076; IFabd; 1.
DR   PROSITE; PS00252; INTERFERON_A_B_D; 1.
KW   Antiviral defense; Cytokine.
SQ   SEQUENCE   189 AA;  21808 MW;  828DF9C33ABC337F CRC64;

  Query Match             91.3%;  Score 786;  DB 2;  Length 189;
  Best Local Similarity   91.6%;  Pred. No. 2.3e-59;
  Matches  152;  Conservative    8;  Mismatches    6;  Indels    0;  Gaps    0;

Qy          2 CDLPQTHSLGNRRALILLAQMRRISPFSCLKDRHDFGFPQEEFDGNQFQKAQAISVLHEM 61
              |||||||||||||||||||| ||| |||||||||||||:|||||:||||||||||||||
Db         24 CDLPQTHSLGNRRALILLAQMGRISHFSCLKDRHDFGFPEEEFDGHQFQKAQAISVLHEM 83

Qy         62 IQQTFNLFSTKDSSAAWDESLLEKFYTELYQQLNDLEACVIQEVGVEETPLMNVDSILAV 121
              ||||||||||:||||||::|||||| |||||||||||||||||||||||||| ||||||
Db         84 IQQTFNLFSTEDSSAAWEQSLLEKFSTELYQQLNDLEACVIQEVGVEETPLMNEDSILAV 143

Qy        122 KKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSLSTNLQERLRRKE 167
              :|||||||||||||||||||||||||| | |||||:|||||:
Db        144 RKYFQRITLYLTEKKYSPCAWEVVRAEIMRSLSFSTNLQKRLRRKD 189


RESULT 8
IFN17_HUMAN
ID   IFN17_HUMAN    STANDARD;      PRT;   189 AA.
AC   P01571; Q14639;
DT   21-JUL-1986, integrated into UniProtKB/Swiss-Prot.
DT   01-OCT-1994, sequence version 2.
DT   07-FEB-2006, entry version 62.
DE   Interferon alpha-17 precursor (Interferon alpha-I') (Interferon alpha-
DE   T) (Interferon alpha-88).
GN   Name=IFNA17;
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Hominidae;
OC   Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   NUCLEOTIDE SEQUENCE.
RX   MEDLINE=81201124; PubMed=6165082;
RA   Lawn R.M., Adelman J., Dull T.J., Gross M., Goeddel D.V., Ullrich A.;
RT   "DNA sequence of two closely linked human leukocyte interferon
RT   genes.";
RL   Science 212:1159-1162(1981).
RN   [2]
RP   NUCLEOTIDE SEQUENCE.
RX   MEDLINE=85229953; PubMed=3891272;
RA   Mizoguchi J., Pitha P.M., Raj N.B.K.;
RT   "Efficient expression in Escherichia coli of two species of human
RT   interferon-alpha and their hybrid molecules.";
RL   DNA 4:221-232(1985).
RN   [3]
RP   NUCLEOTIDE SEQUENCE OF 14-189.
RX   MEDLINE=85235859; PubMed=4008999;
RA   Lund B., von Gabain A., Edlund T., Ny T., Lundgren E.;
RT   "Differential expression of interferon genes in a substrain of Namalwa
RT   cells.";
RL   J. Interferon Res. 5:229-238(1985).
RN   [4]
RP   NUCLEOTIDE SEQUENCE.
RX   MEDLINE=87024453; PubMed=3767336;
RA   Saveliev V.I., Zlochevsky M.L., Sorokin A.V., Naroditskaya V.A.,
RA   Bolotin A.P., Demyanova N.G., Kozlov Y.I., Neznanov N.S.,
RA   Gazaryan K.G., Monastyrskaya G.S., Sverdlov E.D.;
RT   "[Cloning and the determination of the nucleotide sequences in 2 genes
RT   of human leukocyte interferons].";
RL   Antibiot. Med. Biotekhnol. 31:592-596(1986).
RN   [5]
RP   PROTEIN SEQUENCE OF 24-58.
RX   MEDLINE=98087498; PubMed=9425112;
RA   Nyman T.A., Toeloe H., Parkkinen J., Kalkkinen N.;
RT   "Identification of nine interferon-alpha subtypes produced by Sendai
RT   virus-induced human peripheral blood leucocytes.";
RL   Biochem. J. 329:295-302(1998).
RN   [6]
RP   NUCLEOTIDE SEQUENCE OF 24-56.
RX   MEDLINE=92340576; PubMed=1634550;
RA   Zoon K.C., Miller D., Bekisz J., zur Nedden D., Enterline J.C.,
RA   Nguyen N.Y., Hu R.Q.;
RT   "Purification and characterization of multiple components of human
RT   lymphoblastoid interferon-alpha.";
RL   J. Biol. Chem. 267:15210-15216(1992).
RN   [7]
RP   VARIANT ARG-184.
RX   MEDLINE=98376207; PubMed=9712362;
RA   Hussain M., Tan T., Ni D., Gill D.S., Liao M.-J.;
RT   "A new allele of interferon-alpha17 gene encoding IFN-alpha17b is the
RT   major variant in human population.";
RL   J. Interferon Cytokine Res. 18:469-477(1998).
CC   -!- FUNCTION: Produced by macrophages, IFN-alpha have antiviral
CC       activities. Interferon stimulates the production of two enzymes: a
CC       protein kinase and an oligoadenylate synthetase.
CC   -!- SUBCELLULAR LOCATION: Secreted protein.
CC   -!- SIMILARITY: Belongs to the alpha/beta interferon family.
CC   ---------------------------------------------------------------------
CC   Copyrighted by the UniProt Consortium, see http://www.uniprot.org/terms
CC   Distributed under the Creative Commons Attribution-NoDerivs License
CC   ---------------------------------------------------------------------
DR   EMBL; M11026; AAA52725.1; -; mRNA.
DR   EMBL; V00532; CAA23793.1; -; Genomic_DNA.
DR   EMBL; M38289; AAA59165.1; -; mRNA.
DR   EMBL; M71246; AAA52713.1; -; mRNA.
DR   PIR; A01835; IVHUA9.
DR   PIR; I56314; I56314.
DR   HSSP; P01563; 1ITF.
DR   SMR; P01571; 24-189.
DR   Ensembl; ENSG00000186809; Homo sapiens.
DR   HGNC; HGNC:5422; IFNA17.
DR   MIM; 147583; gene.
DR   GO; GO:0005132; F:interferon-alpha/beta receptor binding; TAS.
DR   GO; GO:0009615; P:response to virus; TAS.
DR   InterPro; IPR000471; Interferon_abd.
DR   PANTHER; PTHR11691; Interferon_abd; 1.
DR   Pfam; PF00143; Interferon; 1.
DR   PRINTS; PR00266; INTERFERONAB.
DR   ProDom; PD000550; Interferon_abd; 1.
DR   SMART; SM00076; IFabd; 1.
DR   PROSITE; PS00252; INTERFERON_A_B_D; 1.
KW   Antiviral defense; Cytokine; Direct protein sequencing; Polymorphism;
KW   Signal.
FT   SIGNAL       1     23
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FT   CHAIN        24    189       Interferon alpha-17.
FT                                /FTId=PRO_0000016369.
FT   DISULFID     24    122       By similarity.
FT   DISULFID     52    162       By similarity.
FT   VARIANT     184    184       I -> R (in dbSNP:9298814).
FT                                /FTId=VAR_013020.
FT   CONFLICT     57     57       H -> P (in Ref. 1).
FT   CONFLICT     78     78       S -> P (in Ref. 3).
SQ   SEQUENCE   189 AA;  21728 MW;  0448EAEAB9D7FC32 CRC64;

  Query Match             90.2%;  Score 777;  DB 1;  Length 189;
  Best Local Similarity   90.4%;  Pred. No. 1.4e-58;
  Matches  150;  Conservative    8;  Mismatches    8;  Indels    0;  Gaps    0;

Qy          2 CDLPQTHSLGNRRALILLAQMRRISPFSCLKDRHDFGFPQEEFDGNQFQKAQAISVLHEM 61
              |||||||||||||||||||| ||||||||||||||| |||||||||||| |||||||||
Db         24 CDLPQTHSLGNRRALILLAQMGRISPFSCLKDRHDFGLPQEEFDGNQFQKTQAISVLHEM 83

Qy         62 IQQTFNLFSTKDSSAAWDESLLEKFYTELYQQLNDLEACVIQEVGVEETPLMNVDSILAV 121
              ||||||||||:|||||::|||||| |||||||:|||||||||:||||||| ||||||
Db         84 IQQTFNLFSTEDSSAAWEQSLLEKFSTELYQQLNNLEACVIQEVGMEETPLMNEDSILAV 143

Qy        122 KKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSLSTNLQERLRRKE 167
              :|||||||||||||||||||||||||||| | |||||: ||||:
Db        144 RKYFQRITLYLTEKKYSPCAWEVVRAEIMRSLSFSTNLQKILRRKD 189


RESULT 9
Q5VZ53_HUMAN
ID   Q5VZ53_HUMAN   PRELIMINARY;   PRT;   189 AA.
AC   Q5VZ53;
DT   10-MAY-2005, integrated into UniProtKB/TrEMBL.
DT   10-MAY-2005, sequence version 1.
DT   21-FEB-2006, entry version 8.
DE   Interferon, alpha 17.
GN   Name=IFNA17; ORFNames=RP11-380P16.10-001;
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Hominidae;
OC   Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   NUCLEOTIDE SEQUENCE.
RA   Beasley H.;
RL   Submitted (MAY-2005) to the EMBL/GenBank/DDBJ databases.
RN   [2]
RP   NUCLEOTIDE SEQUENCE.
RC   TISSUE=PCR rescued clones;
RX   MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;
RA   Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
RA   Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
RA   Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
RA   Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
RA   Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RA   Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
RA   Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,
RA   Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
RA   Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
RA   Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RA   Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
RA   Fahey J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A.,
RA   Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
RA   Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
RA   Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
RA   Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smailus D.E.,
RA   Schnerch A., Schein J.E., Jones S.J.M., Marra M.A.;
RT   "Generation and initial analysis of more than 15,000 full-length human
RT   and mouse cDNA sequences.";
RL   Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
RN   [3]
RP   NUCLEOTIDE SEQUENCE.
RC   TISSUE=PCR rescued clones;
RG   NIH MGC Project;
RL   Submitted (JUN-2005) to the EMBL/GenBank/DDBJ databases.
RN   [4]
RP   NUCLEOTIDE SEQUENCE.
RC   TISSUE=PCR rescued clones;
RG   NIH MGC Project;
RL   Submitted (MAY-2005) to the EMBL/GenBank/DDBJ databases.
CC   -!- SUBCELLULAR LOCATION: Secreted protein (By similarity).
CC   ---------------------------------------------------------------------
CC   Copyrighted by the UniProt Consortium, see http://www.uniprot.org/terms
CC   Distributed under the Creative Commons Attribution-NoDerivs License
CC   ---------------------------------------------------------------------
DR   EMBL; AL162420; CAH73185.1; -; Genomic_DNA.
DR   EMBL; BC098355; AAH98355.1; -; mRNA.
DR   EMBL; BC096732; AAH96732.1; -; mRNA.
DR   SMR; Q5VZ53; 24-189.
DR   Ensembl; ENSG00000186809; Homo sapiens.
DR   GO; GO:0005615; C:extracellular space; IEA.
DR   GO; GO:0005126; F:hematopoietin/interferon-class (D200-domain. . .; IEA.
DR   GO; GO:0006952; P:defense response; IEA.
DR   GO; GO:0009615; P:response to virus; IEA.
DR   InterPro; IPR000471; Interferon_abd.
DR   PANTHER; PTHR11691; Interferon_abd; 1.
DR   Pfam; PF00143; Interferon; 1.
DR   PRINTS; PR00266; INTERFERONAB.
DR   SMART; SM00076; IFabd; 1.
DR   PROSITE; PS00252; INTERFERON_A_B_D; 1.
KW   Antiviral defense; Cytokine.
SQ   SEQUENCE   189 AA;  21728 MW;  0448EAEAB9D7FC32 CRC64;

  Query Match             90.2%;  Score 777;  DB 2;  Length 189;
  Best Local Similarity   90.4%;  Pred. No. 1.4e-58;
  Matches  150;  Conservative    8;  Mismatches    8;  Indels    0;  Gaps    0;

Qy          2 CDLPQTHSLGNRRALILLAQMRRISPFSCLKDRHDFGFPQEEFDGNQFQKAQAISVLHEM 61
              |||||||||||||||||||| ||||||||||||||| |||||||||||| |||||||||
Db         24 CDLPQTHSLGNRRALILLAQMGRISPFSCLKDRHDFGLPQEEFDGNQFQKTQAISVLHEM 83

Qy         62 IQQTFNLFSTKDSSAAWDESLLEKFYTELYQQLNDLEACVIQEVGVEETPLMNVDSILAV 121
              ||||||||||:|||||::|||||| |||||||:|||||||||:||||||| ||||||
Db         84 IQQTFNLFSTEDSSAAWEQSLLEKFSTELYQQLNNLEACVIQEVGMEETPLMNEDSILAV 143

Qy        122 KKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSLSTNLQERLRRKE 167
              :|||||||||||||||||||||||||||| | |||||: ||||:
Db        144 RKYFQRITLYLTEKKYSPCAWEVVRAEIMRSLSFSTNLQKILRRKD 189


RESULT 10
IFN10_HUMAN
ID   IFN10_HUMAN    STANDARD;      PRT;   189 AA.
AC   P01566;
DT   21-JUL-1986, integrated into UniProtKB/Swiss-Prot.
DT   21-JUL-1986, sequence version 1.
DT   07-FEB-2006, entry version 61.
DE   Interferon alpha-10 precursor (Interferon alpha-C) (LeIF C)
DE   (Interferon alpha-6L).
GN   Name=IFNA10;
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Hominidae;
OC   Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   NUCLEOTIDE SEQUENCE [MRNA].
RX   MEDLINE=81148795; PubMed=6163083;
RA   Goeddel D.V., Leung D.W., Dull T.J., Gross M., Lawn R.M.,
RA   McCandliss R., Seeburg P.H., Ullrich A., Yelverton E., Gray P.W.;
RT   "The structure of eight distinct cloned human leukocyte interferon
RT   cDNAs.";
RL   Nature 290:20-26(1981).
RN   [2]
RP   NUCLEOTIDE SEQUENCE [MRNA].
RX   MEDLINE=89328015; PubMed=2526839;
RA   Bartholomew C., Windass J.D.;
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RT   "Identification of a functional allele of a human interferon-alpha
RT   gene previously characterized as a pseudogene.";
RL   J. Interferon Res. 9:407-417(1989).
RN   [3]
RP   NUCLEOTIDE SEQUENCE [LARGE SCALE MRNA].
RX   MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;
RA   Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
RA   Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
RA   Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
RA   Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
RA   Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RA   Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
RA   Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,
RA   Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
RA   Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
RA   Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RA   Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
RA   Fahey J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A.,
RA   Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
RA   Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
RA   Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
RA   Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smailus D.E.,
RA   Schnerch A., Schein J.E., Jones S.J.M., Marra M.A.;
RT   "Generation and initial analysis of more than 15,000 full-length human
RT   and mouse cDNA sequences.";
RL   Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
RN   [4]
RP   PROTEIN SEQUENCE OF 24-53.
RX   MEDLINE=98087498; PubMed=9425112;
RA   Nyman T.A., Toeloe H., Parkkinen J., Kalkkinen N.;
RT   "Identification of nine interferon-alpha subtypes produced by Sendai
RT   virus-induced human peripheral blood leucocytes.";
RL   Biochem. J. 329:295-302(1998).
CC   -!- FUNCTION: Produced by macrophages, IFN-alpha have antiviral
CC       activities. Interferon stimulates the production of two enzymes: a
CC       protein kinase and an oligoadenylate synthetase.
CC   -!- SUBCELLULAR LOCATION: Secreted protein.
CC   -!- SIMILARITY: Belongs to the alpha/beta interferon family.
CC   ---------------------------------------------------------------------
CC   Copyrighted by the UniProt Consortium, see http://www.uniprot.org/terms
CC   Distributed under the Creative Commons Attribution-NoDerivs License
CC   ---------------------------------------------------------------------
DR   EMBL; V00551; CAA23812.1; -; mRNA.
DR   EMBL; BC069409; AAH69409.1; -; mRNA.
DR   PIR; A60937; IVHUA5.
DR   HSSP; P01563; 1ITF.
DR   SMR; P01566; 24-189.
DR   Ensembl; ENSG00000186803; Homo sapiens.
DR   HGNC; HGNC:5418; IFNA10.
DR   MIM; 147577; gene.
DR   LinkHub; P01566; -.
DR   GO; GO:0005576; C:extracellular region; NAS.
DR   GO; GO:0005132; F:interferon-alpha/beta receptor binding; ISS.
DR   GO; GO:0009615; P:response to virus; ISS.
DR   InterPro; IPR000471; Interferon_abd.
DR   PANTHER; PTHR11691; Interferon_abd; 1.
DR   Pfam; PF00143; Interferon; 1.
DR   PRINTS; PR00266; INTERFERONAB.
DR   ProDom; PD000550; Interferon_abd; 1.
DR   SMART; SM00076; IFabd; 1.
DR   PROSITE; PS00252; INTERFERON_A_B_D; 1.
KW   Antiviral defense; Cytokine; Direct protein sequencing; Signal.
FT   SIGNAL        1     23
FT   CHAIN        24    189       Interferon alpha-10.
FT                                 /FTId=PRO_0000016366.
FT   DISULFID     24    122       By similarity.
FT   DISULFID     52    162       By similarity.
SQ   SEQUENCE   189 AA;  21835 MW;  CEC680996FDA706B CRC64;

  Query Match             90.1%;  Score 776;  DB 1;  Length 189;
  Best Local Similarity   90.4%;  Pred. No. 1.7e-58;
  Matches  150;  Conservative    7;  Mismatches    9;  Indels    0;  Gaps    0;

Qy          2 CDLPQTHSLGNRRALILLAQMRRISPFSCLKDRHDFGFPQEEFDGNQFQKAQAISVLHEM 61
              |||||||||||||||||| || ||||||||||||||  ||||||||||||||||||||||
Db         24 CDLPQTHSLGNRRALILLGQMGRISPFSCLKDRHDFRIPQEEFDGNQFQKAQAISVLHEM 83

Qy         62 IQQTFNLFSTKDSSAAWDESLLEKFYTELYQQLNDLEACVIQEVGVEETPLMNVDSILAV 121
              ||||||||||:||||||::|||||| |||||||||||||||||||||||||||||| ||||||
Db         84 IQQTFNLFSTEDSSAAWEQSLLEKFSTELYQQLNDLEACVIQEVGVEETPLMNEDSILAV 143

Qy        122 KKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSLSTNLQERLRRKE 167
              :|||||||||| |:||||||||||||||| | |||||:|||||:
Db        144 RKYFQRITLYLIERKYSPCAWEVVRAEIMRSLSFSTNLQKRLRRKD 189


RESULT 11
Q5VV13_HUMAN
ID   Q5VV13_HUMAN   PRELIMINARY;   PRT;   189 AA.
AC   Q5VV13;
DT   10-MAY-2005, integrated into UniProtKB/TrEMBL.
DT   10-MAY-2005, sequence version 1.
DT   21-FEB-2006, entry version 9.
DE   Interferon, alpha 10.
GN   Name=IFNA10; ORFNames=RP11-1P8.9-001;
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Hominidae;
OC   Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   NUCLEOTIDE SEQUENCE.
RA   Pelan S.;
RL   Submitted (MAY-2005) to the EMBL/GenBank/DDBJ databases.
RN   [2]
RP   NUCLEOTIDE SEQUENCE.
RC   TISSUE=PCR rescued clones;
RX   MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;
RA   Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
RA   Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
RA   Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
RA   Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
RA   Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RA   Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
RA   Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,
RA   Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
RA   Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
RA   Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RA   Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
RA   Fahey J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A.,
RA   Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
RA   Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
RA   Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
RA   Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smailus D.E.,
RA   Schnerch A., Schein J.E., Jones S.J.M., Marra M.A.;
RT   "Generation and initial analysis of more than 15,000 full-length human
RT   and mouse cDNA sequences.";
RL   Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
RN   [3]
RP   NUCLEOTIDE SEQUENCE.
RC   TISSUE=PCR rescued clones;
RG   NIH MGC Project;
RL   Submitted (SEP-2005) to the EMBL/GenBank/DDBJ databases.
CC   -!- SUBCELLULAR LOCATION: Secreted protein (By similarity).
CC   ---------------------------------------------------------------------
CC   Copyrighted by the UniProt Consortium, see http://www.uniprot.org/terms
CC   Distributed under the Creative Commons Attribution-NoDerivs License
CC   ---------------------------------------------------------------------
DR   EMBL; AL512606; CAH71191.1; -; Genomic_DNA.
DR   EMBL; BC103972; AAI03973.1; -; mRNA.
DR   EMBL; BC103973; AAI03974.1; -; mRNA.
DR   SMR; Q5VV13; 24-189.
DR   Ensembl; ENSG00000186803; Homo sapiens.
DR   GO; GO:0005615; C:extracellular space; IEA.
DR   GO; GO:0005126; F:hematopoietin/interferon-class (D200-domain. . .; IEA.
DR   GO; GO:0006952; P:defense response; IEA.
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DR   GO; GO:0009615; P:response to virus; IEA.
DR   InterPro; IPR000471; Interferon_abd.
DR   PANTHER; PTHR11691; Interferon_abd; 1.
DR   Pfam; PF00143; Interferon; 1.
DR   PRINTS; PR00266; INTERFERONAB.
DR   SMART; SM00076; IFabd; 1.
DR   PROSITE; PS00252; INTERFERON_A_B_D; 1.
KW   Antiviral defense; Cytokine.
SQ   SEQUENCE   189 AA;  21835 MW;  CEC680996FDA706B CRC64;

  Query Match             90.1%;  Score 776;  DB 2;  Length 189;
  Best Local Similarity   90.4%;  Pred. No. 1.7e-58;
  Matches  150;  Conservative    7;  Mismatches    9;  Indels    0;  Gaps    0;

Qy          2 CDLPQTHSLGNRRALILLAQMRRISPFSCLKDRHDFGFPQEEFDGNQFQKAQAISVLHEM 61
              |||||||||||||||||| || ||||||||||||||  ||||||||||||||||||||||
Db         24 CDLPQTHSLGNRRALILLGQMGRISPFSCLKDRHDFRIPQEEFDGNQFQKAQAISVLHEM 83

Qy         62 IQQTFNLFSTKDSSAAWDESLLEKFYTELYQQLNDLEACVIQEVGVEETPLMNVDSILAV 121
              ||||||||||:||||||::|||||| |||||||||||||||||||||||||| ||||||
Db         84 IQQTFNLFSTEDSSAAWEQSLLEKFSTELYQQLNDLEACVIQEVGVEETPLMNEDSILAV 143

Qy        122 KKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSLSTNLQERLRRKE 167
              :|||||||||| |:||||||||||||||||| | |||||:|||||:
Db        144 RKYFQRITLYLIERKYSPCAWEVVRAEIMRSLSFSTNLQKRLRRKD 189


RESULT 12
IFN14_HUMAN
ID   IFN14_HUMAN     STANDARD;      PRT;   189 AA.
AC   P01570;
DT   21-JUL-1986, integrated into UniProtKB/Swiss-Prot.
DT   21-JUL-1986, sequence version 3.
DT   07-FEB-2006, entry version 63.
DE   Interferon alpha-14 precursor (Interferon alpha-H) (LeIF H)
DE   (Interferon lambda-2-H).
GN   Name=IFNA14;
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Hominidae;
OC   Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   NUCLEOTIDE SEQUENCE.
RX   MEDLINE=86037205; PubMed=4057246;
RA   Henco K., Brosius J., Fujisawa A., Fujisawa J., Haynes J.R.,
RA   Hochstadt J., Kovacic T., Pasek M., Schamboeck A., Schmid J.,
RA   Todokoro K., Waelchli M., Nagata S., Weissmann C.;
RT   "Structural relationship of human interferon alpha genes and
RT   pseudogenes.";
RL   J. Mol. Biol. 185:227-260(1985).
RN   [2]
RP   NUCLEOTIDE SEQUENCE.
RX   MEDLINE=81201124; PubMed=6165082;
RA   Lawn R.M., Adelman J., Dull T.J., Gross M., Goeddel D.V., Ullrich A.;
RT   "DNA sequence of two closely linked human leukocyte interferon
RT   genes.";
RL   Science 212:1159-1162(1981).
RN   [3]
RP   NUCLEOTIDE SEQUENCE.
RX   MEDLINE=81148795; PubMed=6163083;
RA   Goeddel D.V., Leung D.W., Dull T.J., Gross M., Lawn R.M.,
RA   McCandliss R., Seeburg P.H., Ullrich A., Yelverton E., Gray P.W.;
RT   "The structure of eight distinct cloned human leukocyte interferon
RT   cDNAs.";
RL   Nature 290:20-26(1981).
RN   [4]
RP   NUCLEOTIDE SEQUENCE [LARGE SCALE MRNA].
RX   MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;
RA   Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
RA   Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
RA   Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
RA   Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
RA   Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RA   Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
RA   Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,
RA   Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
RA   Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
RA   Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RA   Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
RA   Fahey J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A.,
RA   Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
RA   Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
RA   Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
RA   Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smailus D.E.,
RA   Schnerch A., Schein J.E., Jones S.J.M., Marra M.A.;
RT   "Generation and initial analysis of more than 15,000 full-length human
RT   and mouse cDNA sequences.";
RL   Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
RN   [5]
RP   PROTEIN SEQUENCE OF 24-53, AND CARBOHYDRATE-LINKAGE SITE ASN-95.
RX   MEDLINE=98087498; PubMed=9425112;
RA   Nyman T.A., Toeloe H., Parkkinen J., Kalkkinen N.;
RT   "Identification of nine interferon-alpha subtypes produced by Sendai
RT   virus-induced human peripheral blood leucocytes.";
RL   Biochem. J. 329:295-302(1998).
RN   [6]
RP   ABSENCE OF POLYMORPHISM.
RX   MEDLINE=97067358; PubMed=8910771;
RA   Hussain M., Gill D.S., Liao M.-J.;
RT   "Identification of interferon-alpha 7, -alpha 14, and -alpha 21
RT   variants in the genome of a large human population.";
RL   J. Interferon Cytokine Res. 16:853-859(1996).
CC   -!- FUNCTION: Produced by macrophages, IFN-alpha have antiviral
CC       activities. Interferon stimulates the production of two enzymes: a
CC       protein kinase and an oligoadenylate synthetase.
CC   -!- SUBCELLULAR LOCATION: Secreted protein.
CC   -!- SIMILARITY: Belongs to the alpha/beta interferon family.
CC   ----------------------------------------------------------------------
CC   Copyrighted by the UniProt Consortium, see http://www.uniprot.org/terms
CC   Distributed under the Creative Commons Attribution-NoDerivs License
CC   ----------------------------------------------------------------------
DR   EMBL; V00533; CAA23794.1; -; Genomic_DNA.
DR   EMBL; X02959; CAA26705.1; -; Genomic_DNA.
DR   EMBL; V00542; CAA23803.1; -; mRNA.
DR   EMBL; BC074956; AAH74956.1; -; mRNA.
DR   PIR; A92916; IVHU14.
DR   HSSP; P01563; 1ITF.
DR   SMR; P01570; 24-189.
DR   GlycoSuiteDB; P01570; -.
DR   HGNC; HGNC:5420; IFNA14.
DR   MIM; 147579; gene.
DR   GO; GO:0005126; F:hematopoietin/interferon-class (D200-domain. . .; TAS.
DR   InterPro; IPR000471; Interferon_abd.
DR   PANTHER; PTHR11691; Interferon_abd; 1.
DR   Pfam; PF00143; Interferon; 1.
DR   PRINTS; PR00266; INTERFERONAB.
DR   ProDom; PD000550; Interferon_abd; 1.
DR   SMART; SM00076; IFabd; 1.
DR   PROSITE; PS00252; INTERFERON_A_B_D; 1.
KW   Antiviral defense; Cytokine; Direct protein sequencing; Glycoprotein;
KW   Signal.
FT   SIGNAL        1     23
FT   CHAIN        24    189       Interferon alpha-14.
FT                                 /FTId=PRO_0000016367.
FT   CARBOHYD     95     95       N-linked (GlcNAc. . .).
FT   DISULFID     24    122       By similarity.
FT   DISULFID     52    162       By similarity.
FT   CONFLICT    175    175       L -> F (in Ref. 3).
SQ   SEQUENCE   189 AA;  22063 MW;  B6B71E2F0D644FE7 CRC64;

  Query Match             89.2%;  Score 768;  DB 1;  Length 189;
  Best Local Similarity   88.6%;  Pred. No. 8.1e-58;
  Matches  147;  Conservative   10;  Mismatches    9;  Indels    0;  Gaps    0;

Qy          2 CDLPQTHSLGNRRALILLAQMRRISPFSCLKDRHDFGFPQEEFDGNQFQKAQAISVLHEM 61
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Db          24 CNLSQTHSLNNRRTLMLMAQMRRISPFSCLKDRHDFEFPQEEFDGNQFQKAQAISVLHEM 83

Qy          62 IQQTFNLFSTKDSSAAWDESLLEKFYTELYQQLNDLEACVIQEVGVEETPLMNVDSILAV 121
               :||||||||||:|||||||:|||||| ||:||:||||||||||||||||||| ||||||
Db          84 MQQTFNLFSTKNSSAAWDETLLEKFYIELFQQMNDLEACVIQEVGVEETPLMNEDSILAV 143

Qy         122 KKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSLSTNLQERLRRKE 167
               |||||||||||| |||||||||||||||||| | |||||:|||||:
Db         144 KKYFQRITLYLMEKKYSPCAWEVVRAEIMRSLSFSTNLQKRLRRKD 189


RESULT 13
Q5VZ56_HUMAN
ID   Q5VZ56_HUMAN   PRELIMINARY;   PRT;   189 AA.
AC   Q5VZ56;
DT   10-MAY-2005, integrated into UniProtKB/TrEMBL.
DT   10-MAY-2005, sequence version 1.
DT   21-FEB-2006, entry version 9.
DE   Interferon, alpha 14 (IFNA14 protein).
GN   Name=IFNA14; ORFNames=RP11-380P16.9-001;
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Hominidae;
OC   Homo.
OX   NCBI_TaxID=9606;
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RP   NUCLEOTIDE SEQUENCE.
RA   Beasley H.;
RL   Submitted (MAY-2005) to the EMBL/GenBank/DDBJ databases.
RN   [2]
RP   NUCLEOTIDE SEQUENCE.
RC   TISSUE=PCR rescued clones;
RX   MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;
RA   Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
RA   Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
RA   Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
RA   Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
RA   Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RA   Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
RA   Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,
RA   Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
RA   Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
RA   Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RA   Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
RA   Fahey J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A.,
RA   Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
RA   Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
RA   Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
RA   Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smailus D.E.,
RA   Schnerch A., Schein J.E., Jones S.J.M., Marra M.A.;
RT   "Generation and initial analysis of more than 15,000 full-length human
RT   and mouse cDNA sequences.";
RL   Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
RN   [3]
RP   NUCLEOTIDE SEQUENCE.
RC   TISSUE=PCR rescued clones;
RG   NIH MGC Project;
RL   Submitted (SEP-2005) to the EMBL/GenBank/DDBJ databases.
CC   -!- SUBCELLULAR LOCATION: Secreted protein (By similarity).
CC   ---------------------------------------------------------------------
CC   Copyrighted by the UniProt Consortium, see http://www.uniprot.org/terms
CC   Distributed under the Creative Commons Attribution-NoDerivs License
CC   ---------------------------------------------------------------------
DR   EMBL; AL162420; CAH73187.1; -; Genomic_DNA.
DR   EMBL; BC104159; AAI04160.1; -; mRNA.
DR   EMBL; BC104160; AAI04161.1; -; mRNA.
DR   SMR; Q5VZ56; 24-189.
DR   Ensembl; ENSG00000137026; Homo sapiens.
DR   GO; GO:0005615; C:extracellular space; IEA.
DR   GO; GO:0005126; F:hematopoietin/interferon-class (D200-domain. . .; IEA.
DR   GO; GO:0006952; P:defense response; IEA.
DR   GO; GO:0009615; P:response to virus; IEA.
DR   InterPro; IPR000471; Interferon_abd.
DR   PANTHER; PTHR11691; Interferon_abd; 1.
DR   Pfam; PF00143; Interferon; 1.
DR   PRINTS; PR00266; INTERFERONAB.
DR   SMART; SM00076; IFabd; 1.
DR   PROSITE; PS00252; INTERFERON_A_B_D; 1.
KW   Antiviral defense; Cytokine.
SQ   SEQUENCE   189 AA;  22063 MW;  B6B71E2F0D644FE7 CRC64;

  Query Match             89.2%;  Score 768;  DB 2;  Length 189;
  Best Local Similarity   88.6%;  Pred. No. 8.1e-58;
  Matches  147;  Conservative   10;  Mismatches    9;  Indels    0;  Gaps    0;

Qy           2 CDLPQTHSLGNRRALILLAQMRRISPFSCLKDRHDFGFPQEEFDGNQFQKAQAISVLHEM 61
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Db          24 CNLSQTHSLNNRRTLMLMAQMRRISPFSCLKDRHDFEFPQEEFDGNQFQKAQAISVLHEM 83

Qy          62 IQQTFNLFSTKDSSAAWDESLLEKFYTELYQQLNDLEACVIQEVGVEETPLMNVDSILAV 121
               :||||||||||:|||||||:|||||| ||:||:||||||||||||||||||| ||||||
Db          84 MQQTFNLFSTKNSSAAWDETLLEKFYIELFQQMNDLEACVIQEVGVEETPLMNEDSILAV 143

Qy         122 KKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSLSTNLQERLRRKE 167
               |||||||||||| |||||||||||||||||| | |||||:|||||:
Db         144 KKYFQRITLYLMEKKYSPCAWEVVRAEIMRSLSFSTNLQKRLRRKD 189


RESULT 14
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ID   IFNA7_HUMAN    STANDARD;      PRT;   189 AA.
AC   P01567; Q14607;
DT   21-JUL-1986, integrated into UniProtKB/Swiss-Prot.
DT   21-JUL-1986, sequence version 1.
DT   07-FEB-2006, entry version 62.
DE   Interferon alpha-7 precursor (Interferon alpha-J1) (IFN-alpha-J1)
DE   (Interferon alpha-J) (LeIF J).
GN   Name=IFNA7;
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Hominidae;
OC   Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   NUCLEOTIDE SEQUENCE.
RX   MEDLINE=86037205; PubMed=4057246;
RA   Henco K., Brosius J., Fujisawa A., Fujisawa J., Haynes J.R.,
RA   Hochstadt J., Kovacic T., Pasek M., Schamboeck A., Schmid J.,
RA   Todokoro K., Waelchli M., Nagata S., Weissmann C.;
RT   "Structural relationship of human interferon alpha genes and
RT   pseudogenes.";
RL   J. Mol. Biol. 185:227-260(1985).
RN   [2]
RP   NUCLEOTIDE SEQUENCE.
RX   MEDLINE=83010248; PubMed=6181262;
RA   Ullrich A., Gray A., Goeddel D.V., Dull T.J.;
RT   "Nucleotide sequence of a portion of human chromosome 9 containing a
RT   leukocyte interferon gene cluster.";
RL   J. Mol. Biol. 156:467-486(1982).
RN   [3]
RP   NUCLEOTIDE SEQUENCE.
RX   MEDLINE=86005847; PubMed=2995168;
RA   Cohen S., Velan B., Grosfeld H., Shalita Z., Leitner M.,
RA   Shafferman A.;
RT   "Cloning, expression and biological activity of a new variant of human
RT   interferon alpha identified in virus induced lymphoblastoid cells.";
RL   Dev. Biol. Stand. 60:111-122(1985).
RN   [4]
RP   NUCLEOTIDE SEQUENCE [LARGE SCALE MRNA].
RC   TISSUE=Brain;
RX   MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;
RA   Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
RA   Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
RA   Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
RA   Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
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RA   Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RA   Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
RA   Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,
RA   Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
RA   Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
RA   Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RA   Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
RA   Fahey J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A.,
RA   Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
RA   Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
RA   Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
RA   Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smailus D.E.,
RA   Schnerch A., Schein J.E., Jones S.J.M., Marra M.A.;
RT   "Generation and initial analysis of more than 15,000 full-length human
RT   and mouse cDNA sequences.";
RL   Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
RN   [5]
RP   PROTEIN SEQUENCE OF 24-57.
RX   MEDLINE=98087498; PubMed=9425112;
RA   Nyman T.A., Toeloe H., Parkkinen J., Kalkkinen N.;
RT   "Identification of nine interferon-alpha subtypes produced by Sendai
RT   virus-induced human peripheral blood leucocytes.";
RL   Biochem. J. 329:295-302(1998).
RN   [6]
RP   ABSENCE OF POLYMORPHISM.
RX   MEDLINE=97067358; PubMed=8910771;
RA   Hussain M., Gill D.S., Liao M.-J.;
RT   "Identification of interferon-alpha 7, -alpha 14, and -alpha 21
RT   variants in the genome of a large human population.";
RL   J. Interferon Cytokine Res. 16:853-859(1996).
CC   -!- FUNCTION: Produced by macrophages, IFN-alpha have antiviral
CC       activities. Interferon stimulates the production of two enzymes: a
CC       protein kinase and an oligoadenylate synthetase.
CC   -!- SUBCELLULAR LOCATION: Secreted protein.
CC   -!- SIMILARITY: Belongs to the alpha/beta interferon family.
CC   ---------------------------------------------------------------------
CC   Copyrighted by the UniProt Consortium, see http://www.uniprot.org/terms
CC   Distributed under the Creative Commons Attribution-NoDerivs License
CC   ---------------------------------------------------------------------
DR   EMBL; V00531; CAA23792.1; -; Genomic_DNA.
DR   EMBL; X02960; CAA26706.1; -; Genomic_DNA.
DR   EMBL; M34913; AAA36039.1; -; mRNA.
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DR   PIR; A01831; IVHUA0.
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DR   SMR; P01567; 24-189.
DR   Ensembl; ENSG00000147877; Homo sapiens.
DR   HGNC; HGNC:5428; IFNA7.
DR   MIM; 147567; gene.
DR   GO; GO:0005576; C:extracellular region; TAS.
DR   GO; GO:0005132; F:interferon-alpha/beta receptor binding; TAS.
DR   GO; GO:0007267; P:cell-cell signaling; TAS.
DR   GO; GO:0009615; P:response to virus; TAS.
DR   InterPro; IPR000471; Interferon_abd.
DR   PANTHER; PTHR11691; Interferon_abd; 1.
DR   Pfam; PF00143; Interferon; 1.
DR   PRINTS; PR00266; INTERFERONAB.
DR   ProDom; PD000550; Interferon_abd; 1.
DR   SMART; SM00076; IFabd; 1.
DR   PROSITE; PS00252; INTERFERON_A_B_D; 1.
KW   Antiviral defense; Cytokine; Direct protein sequencing; Signal.
FT   SIGNAL        1     23
FT   CHAIN        24    189       Interferon alpha-7.
FT                                 /FTId=PRO_0000016364.
FT   DISULFID      24    122       By similarity.
FT   DISULFID      52    162       By similarity.
FT   CONFLICT      10     10       V -> A (in Ref. 3).
FT   CONFLICT     155    155       M -> T (in Ref. 3).
SQ   SEQUENCE   189 AA;  22107 MW;  9DF6F5C81E339A42 CRC64;

  Query Match             87.6%;  Score 754;  DB 1;  Length 189;
  Best Local Similarity   88.0%;  Pred. No. 1.3e-56;
  Matches  146;  Conservative   10;  Mismatches   10;  Indels    0;  Gaps    0;

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Qy         62 IQQTFNLFSTKDSSAAWDESLLEKFYTELYQQLNDLEACVIQEVGVEETPLMNVDSILAV 121
              ||||||||||:||||||::|||||| |||||||||||||||||||||||||| | ||||
Db         84 IQQTFNLFSTEDSSAAWEQSLLEKFSTELYQQLNDLEACVIQEVGVEETPLMNEDFILAV 143

Qy        122 KKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSLSTNLQERLRRKE 167
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DT   10-MAY-2005, sequence version 1.
DT   21-FEB-2006, entry version 6.
DE   Interferon, alpha 7.
GN   Name=IFNA7; ORFNames=RP11-1P8.8-001;
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OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Hominidae;
OC   Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   NUCLEOTIDE SEQUENCE.
RA   Pelan S.;
RL   Submitted (MAY-2005) to the EMBL/GenBank/DDBJ databases.
CC   -!- SUBCELLULAR LOCATION: Secreted protein (By similarity).
CC   ---------------------------------------------------------------------
CC   Copyrighted by the UniProt Consortium, see http://www.uniprot.org/terms
CC   Distributed under the Creative Commons Attribution-NoDerivs License
CC   ---------------------------------------------------------------------
DR   EMBL; AL512606; CAH71190.1; -; Genomic_DNA.
DR   Ensembl; ENSG00000147877; Homo sapiens.
DR   GO; GO:0005615; C:extracellular space; IEA.
DR   GO; GO:0005126; F:hematopoietin/interferon-class (D200-domain. . .; IEA.
DR   GO; GO:0006952; P:defense response; IEA.
DR   GO; GO:0009615; P:response to virus; IEA.
DR   InterPro; IPR000471; Interferon_abd.
DR   PANTHER; PTHR11691; Interferon_abd; 1.
DR   Pfam; PF00143; Interferon; 1.
DR   PRINTS; PR00266; INTERFERONAB.
DR   SMART; SM00076; IFabd; 1.
DR   PROSITE; PS00252; INTERFERON_A_B_D; 1.
KW   Antiviral defense; Cytokine.
SQ   SEQUENCE   189 AA;  22107 MW;  9DF6F5C81E339A42 CRC64;

  Query Match             87.6%;  Score 754;  DB 2;  Length 189;
  Best Local Similarity   88.0%;  Pred. No. 1.3e-56;
  Matches  146;  Conservative   10;  Mismatches   10;  Indels    0;  Gaps    0;

Qy          2 CDLPQTHSLGNRRALILLAQMRRISPFSCLKDRHDFGFPQEEFDGNQFQKAQAISVLHEM 61
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Qy         62 IQQTFNLFSTKDSSAAWDESLLEKFYTELYQQLNDLEACVIQEVGVEETPLMNVDSILAV 121
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Db         84 IQQTFNLFSTEDSSAAWEQSLLEKFSTELYQQLNDLEACVIQEVGVEETPLMNEDFILAV 143

Qy        122 KKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSLSTNLQERLRRKE 167
              :|||||||||| |||||||||||||||||| ||||:: ||||:
Db        144 RKYFQRITLYLMEKKYSPCAWEVVRAEIMRSFSFSTNLKKGLRRKD 189


Search completed: September  1, 2006, 13:27:13
Job time : 299 secs
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GenCore version 5.1.9

OM protein - protein search, using sw model

Run on: September 1, 2006, 13:27:29 ; Search time 49 Seconds
(without alignments)
298.319 Million cell updates/sec

Title: US-10-650-365A-2
Perfect score: 861
Sequence: 1 MCDLPQTHSLGNRRALILLA.....EIMRSFSLSTNLQERLRRKE 167

Scoring table: BLOSUM62
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Searched: 650591 seqs, 87530628 residues

Total number of hits satisfying chosen parameters: 650591

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

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6: /EMC_Celerra_SIDS3/ptodata/2/iaa/RE_COMB.pep:*
7: /EMC_Celerra_SIDS3/ptodata/2/iaa/backfiles1.pep:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	839	97.4	166	1	US-08-362-453-8	Sequence 8, Appli
2	824	95.7	166	2	US-09-744-754C-34	Sequence 34, Appl
3	808	93.8	189	1	US-08-026-758-1	Sequence 1, Appli
4	807	93.7	166	2	US-09-339-913B-75	Sequence 75, Appl
5	807	93.7	166	2	US-09-339-904A-75	Sequence 75, Appl
6	807	93.7	166	2	US-08-769-062B-75	Sequence 75, Appl
7	807	93.7	166	2	US-09-344-002B-75	Sequence 75, Appl
8	807	93.7	166	2	US-09-559-565C-75	Sequence 75, Appl
9	807	93.7	166	2	US-09-693-350-75	Sequence 75, Appl
10	807	93.7	166	2	US-09-693-389-75	Sequence 75, Appl
11	807	93.7	166	2	US-09-559-671A-75	Sequence 75, Appl
12	807	93.7	166	2	US-09-339-926A-75	Sequence 75, Appl
13	807	93.7	166	2	US-09-954-692-75	Sequence 75, Appl
14	804	93.4	167	2	US-06-256-204C-49	Sequence 49, Appl
15	801	93.0	189	2	US-09-206-935-11	Sequence 11, Appl
16	801	93.0	189	2	US-09-949-016-8554	Sequence 8554, Ap
17	801	93.0	189	2	US-09-949-016-9682	Sequence 9682, Ap
18	801	93.0	189	2	US-09-949-016-9683	Sequence 9683, Ap
19	801	93.0	189	2	US-09-949-016-9684	Sequence 9684, Ap
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22	799	92.8	189	2	US-09-206-935-19	Sequence 19, Appl
23	799	92.8	189	2	US-09-206-936-19	Sequence 19, Appl
24	799	92.8	189	2	US-07-145-002B-12	Sequence 12, Appl
25	799	92.8	189	2	US-07-145-002B-22	Sequence 22, Appl
26	799	92.8	189	2	US-06-256-204C-12	Sequence 12, Appl
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32	793	92.1	166	2	US-09-339-904A-84	Sequence 84, Appl
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36	793	92.1	166	2	US-09-693-350-84	Sequence 84, Appl
37	793	92.1	166	2	US-09-693-389-84	Sequence 84, Appl
38	793	92.1	166	2	US-09-559-671A-84	Sequence 84, Appl
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40	793	92.1	166	2	US-09-954-692-84	Sequence 84, Appl
41	792	92.0	189	2	US-09-206-936-11	Sequence 11, Appl
42	791	91.9	166	2	US-09-744-754C-36	Sequence 36, Appl
43	791	91.9	166	2	US-09-744-754C-38	Sequence 38, Appl
44	789	91.6	166	2	US-09-744-754C-32	Sequence 32, Appl
45	788	91.5	166	2	US-09-339-913B-79	Sequence 79, Appl

ALIGNMENTS

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RESULT 1
US-08-362-453-8
; Sequence 8, Application US/08362453
; Patent No. 5684129
;  GENERAL INFORMATION:
;    APPLICANT:  FISH, Eleanor N.
;    TITLE OF INVENTION:  INTERFERON RECEPTOR BINDING PEPTIDES
;    NUMBER OF SEQUENCES:  17
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Nikaido, Marmelstein, Murray & Oram
;      STREET:  655 Fifteenth Street N.W. Suite 330
;      CITY:  Washington
;      STATE:  D.C.
;      COUNTRY:  U.S.A.
;      ZIP:  20005-5701
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/362,453
;      FILING DATE:  06-JAN-1995
;      CLASSIFICATION:  514
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/909,739
;      APPLICATION NUMBER:  FILING DATE: 07-JUL-1992
;      APPLICATION NUMBER:  US 07/980,525
;      APPLICATION NUMBER:  FILING DATE: 20-NOV-1992
;      APPLICATION NUMBER:  PCT/CA93/00279
;      APPLICATION NUMBER:  FILING DATE: 06-JUL-1993
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Kitts, Monica Chin
;      REGISTRATION NUMBER:  36,105
;      REFERENCE/DOCKET NUMBER:  P638-4017
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (202) 638-5000
;      TELEFAX:  (202) 638-4810
;  INFORMATION FOR SEQ ID NO:  8:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  166 amino acids
;      TYPE:  amino acid
;      TOPOLOGY:  unknown
;    MOLECULE TYPE:  protein
US-08-362-453-8

  Query Match             97.4%;  Score 839;  DB 1;  Length 166;
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Qy          2 CDLPQTHSLGNRRALILLAQMRRISPFSCLKDRHDFGFPQEEFDGNQFQKAQAISVLHEM 61
              |||||||||||| |||||||||||||||||||||||||||||||||||||||| ||||
Db          1 CDLPQTHSLGNRRTLILLAQMRRISPFSCLKDRHDFGFPQEEFDGNQFQKAQAISYLHEM 60

Qy         62 IQQTFNLFSTKDSSAAWDESLLEKFYTELYQQLNDLEACVIQEVGVEETPLMNVDSILAV 121
              |||||||||||||||||||||||||||||||||||||||| ||||||||||||||||||
Db         61 IQQTFNLFSTKDSSAAWDESLLEKFYTELYQQLNDLEACYIQEVGVEETPLMNVDSILAV 120

Qy        122 KKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSLSTNLQERLRRKE 167
              :||||||||||||||||||||||||||||||||||||||||||||||
Db        121 RKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSLSTNLQERLRRKE 166


RESULT 2
US-09-744-754C-34
; Sequence 34, Application US/09744754C
; Patent No. 6685933
; GENERAL INFORMATION:
;  APPLICANT: Zoon, et al.
;  TITLE OF INVENTION: Interferon Alpha Hybrids
;  FILE REFERENCE: 4239-56957
;  CURRENT APPLICATION NUMBER: US/09/744,754C
;  CURRENT FILING DATE:  2001-01-24
;  PRIOR APPLICATION NUMBER: US 60/094,407
;  PRIOR FILING DATE: 1998-07-28
;  PRIOR APPLICATION NUMBER: PCT/US99/15284
;  PRIOR FILING DATE: 1999-07-06
;  NUMBER OF SEQ ID NOS: 42
;  SOFTWARE: PatentIn version 3.2
; SEQ ID NO 34
;   LENGTH: 166
;   TYPE: PRT
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Gene Fusion
US-09-744-754C-34

  Query Match             95.7%;  Score 824;  DB 2;  Length 166;
  Best Local Similarity   96.4%;  Pred. No. 1.6e-86;
  Matches  160;  Conservative    2;  Mismatches    4;  Indels    0;  Gaps    0;

Qy          2 CDLPQTHSLGNRRALILLAQMRRISPFSCLKDRHDFGFPQEEFDGNQFQKAQAISVLHEM 61
              |||||||||||||||||||| |||||||||||||||||||||||||||||||||||||||
Db          1 CDLPQTHSLGNRRALILLAQMGRISPFSCLKDRHDFGFPQEEFDGNQFQKAQAISVLHEM 60

Qy         62 IQQTFNLFSTKDSSAAWDESLLEKFYTELYQQLNDLEACVIQEVGVEETPLMNVDSILAV 121
              ||||||||||||||||||:||:||||||||||||||||||||||||||||||||||||||
Db         61 IQQTFNLFSTKDSSAAWDETLLDKFYTELYQQLNDLEACVIQEVGVEETPLMNVDSILAV 120

Qy        122 KKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSLSTNLQERLRRKE 167
              |||||||||||||||||||||||||||||||||   ||||||||
Db        121 KKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSLSKIFQERLRRKE 166


RESULT 3
US-08-026-758-1
; Sequence 1, Application US/08026758
; Patent No. 5780021
;  GENERAL INFORMATION:
;    APPLICANT:  SOBEL, DOUGLAS O.
;    TITLE OF INVENTION:  A METHOD FOR TREATING AUTOIMMUNE
;    TITLE OF INVENTION:  DISEASES USING ALPHA-INTERFERON AND/OR BETA-INTERFERON
;    NUMBER OF SEQUENCES:  26
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  OBLON, SPIVAK, McCLELLAND, MAIER & NEUSTADT,
;      ADDRESSEE:  P.C.
;      STREET:  1755 S. Jefferson Davis Highway, Suite 400
;      CITY:  Arlington
;      STATE:  Virginia
;      COUNTRY:  U.S.A.
;      ZIP:  22202
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/026,758
;      FILING DATE:  19930305
;      CLASSIFICATION:  424
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Oblon, No. 5780021man F.
;      REGISTRATION NUMBER:  24,618
;      REFERENCE/DOCKET NUMBER:  1126-096-0
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (703) 413-3000
;      TELEFAX:  (703) 413-2220
;      TELEX:  248855 OPAT UR
;  INFORMATION FOR SEQ ID NO:  1:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  189 amino acids
;      TYPE:  amino acid
;      TOPOLOGY:  unknown
;    MOLECULE TYPE:  protein
;    FEATURE:
;      NAME/KEY:  Protein
;      LOCATION:  24..189
;      OTHER INFORMATION:  /note= "IFN-alpha consensus"
;    FEATURE:
;      NAME/KEY:  Modified-site
;      LOCATION:  55
;      OTHER INFORMATION:  /note= "The one-letter code at position
;      OTHER INFORMATION:  55 appears to be a typographical error in Table 1 of the
;      OTHER INFORMATION:  specification."
;    FEATURE:
;      NAME/KEY:  Modified-site
;      LOCATION:  124
;      OTHER INFORMATION:  /note= "The one-letter code at position
;      OTHER INFORMATION:  124 appears to be a typographical error in Table 1 of the
;      OTHER INFORMATION:  specification."
US-08-026-758-1

  Query Match             93.8%;  Score 808;  DB 1;  Length 189;
  Best Local Similarity   94.6%;  Pred. No. 1.3e-84;
  Matches  157;  Conservative    3;  Mismatches    6;  Indels    0;  Gaps    0;

Qy          2 CDLPQTHSLGNRRALILLAQMRRISPFSCLKDRHDFGFPQEEFDGNQFQKAQAISVLHEM 61
              |||||||||||||||||||| ||||||||| ||||||||||||||||||||||||||||||
Db         24 CDLPQTHSLGNRRALILLAQMGRISPFSCLKXRHDFGFPQEEFDGNQFQKAQAISVLHEM 83

Qy         62 IQQTFNLFSTKDSSAAWDESLLEKFYTELYQQLNDLEACVIQEVGVEETPLMNVDSILAV 121
              ||||||||||||||||||||||| |||||||||||| |||||||||||| ||||||
Db         84 IQQTFNLFSTKDSSAAWDESLLEKFSTELYQQLNDLEACVXQEVGVEETPLMNEDSILAV 143

Qy        122 KKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSLSTNLQERLRRKE 167
              :|||||||||||||||||||||||||||||||| |||||:|||||:
Db        144 RKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSFSTNLQKRLRRKD 189


RESULT 4
US-09-339-913B-75
; Sequence 75, Application US/09339913B
; Patent No. 6303344
; GENERAL INFORMATION:
;  APPLICANT: Patten, Phillip
;  APPLICANT:  Stemmer, Willem P.C.
;  TITLE OF INVENTION: METHODS AND COMPOSITIONS FOR POLYPEPTIDE ENGINEERING
;  FILE REFERENCE: 02-020503US
;  CURRENT APPLICATION NUMBER: US/09/339,913B
;  CURRENT FILING DATE:  1999-06-24
;  PRIOR APPLICATION NUMBER: 08/769,062
;  PRIOR FILING DATE: 1996-12-18
;  PRIOR APPLICATION NUMBER: 08/198,431
;  PRIOR FILING DATE: 1994-02-17
;  PRIOR APPLICATION NUMBER: 08/425,684
```

```
;  PRIOR FILING DATE: 1995-04-18
;  PRIOR APPLICATION NUMBER: 08/537,874
;  PRIOR FILING DATE: 1995-10-30
;  NUMBER OF SEQ ID NOS: 101
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 75
;   LENGTH: 166
;   TYPE: PRT
;   ORGANISM: consensus alpha interferon
US-09-339-913B-75

  Query Match            93.7%;  Score 807;  DB 2;  Length 166;
  Best Local Similarity  94.0%;  Pred. No. 1.5e-84;
  Matches  156;  Conservative    5;  Mismatches    5;  Indels    0;  Gaps    0;

Qy          2 CDLPQTHSLGNRRALILLAQMRRISPFSCLKDRHDFGFPQEEFDGNQFQKAQAISVLHEM 61
              |||||||||||||||||||| |||||||||||||||||||||||||||||||||||||||
Db          1 CDLPQTHSLGNRRALILLAQMGRISPFSCLKDRHDFGFPQEEFDGNQFQKAQAISVLHEM 60

Qy         62 IQQTFNLFSTKDSSAAWDESLLEKFYTELYQQLNDLEACVIQEVGVEETPLMNVDSILAV 121
              ||||||||||||||::|||||| |||||||||||||||||||||||| ||||||
Db         61 IQQTFNLFSTKDSSAAWEQSLLEKFSTELYQQLNDLEACVIQEVGVEETPLMNEDSILAV 120

Qy        122 KKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSLSTNLQERLRRKE 167
              :||||||||||||||||||||||||||||| | |||||:|||||:
Db        121 RKYFQRITLYLTEKKYSPCAWEVVRAEIMRSLSFSTNLQKRLRRKD 166


RESULT 5
US-09-339-904A-75
; Sequence 75, Application US/09339904A
; Patent No. 6319713
; GENERAL INFORMATION:
;  APPLICANT: Patten, Phillip
;  APPLICANT:  Stemmer, Willem P.C.
;  TITLE OF INVENTION: METHODS AND COMPOSITIONS FOR POLYPEPTIDE ENGINEERING
;  FILE REFERENCE: 02-020504US
;  CURRENT APPLICATION NUMBER: US/09/339,904A
;  CURRENT FILING DATE:  1999-06-24
;  PRIOR APPLICATION NUMBER: 08/769,062
;  PRIOR FILING DATE: 1996-12-18
;  PRIOR APPLICATION NUMBER: 08/198,431
;  PRIOR FILING DATE: 1994-02-17
;  PRIOR APPLICATION NUMBER: 08/425,684
;  PRIOR FILING DATE: 1995-04-18
;  PRIOR APPLICATION NUMBER: 08/537,874
;  PRIOR FILING DATE: 1995-10-30
;  NUMBER OF SEQ ID NOS: 101
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 75
;   LENGTH: 166
;   TYPE: PRT
;   ORGANISM: consensus alpha interferon
US-09-339-904A-75

  Query Match            93.7%;  Score 807;  DB 2;  Length 166;
  Best Local Similarity  94.0%;  Pred. No. 1.5e-84;
  Matches  156;  Conservative    5;  Mismatches    5;  Indels    0;  Gaps    0;

Qy          2 CDLPQTHSLGNRRALILLAQMRRISPFSCLKDRHDFGFPQEEFDGNQFQKAQAISVLHEM 61
              |||||||||||||||||||| |||||||||||||||||||||||||||||||||||||||
Db          1 CDLPQTHSLGNRRALILLAQMGRISPFSCLKDRHDFGFPQEEFDGNQFQKAQAISVLHEM 60

Qy         62 IQQTFNLFSTKDSSAAWDESLLEKFYTELYQQLNDLEACVIQEVGVEETPLMNVDSILAV 121
              ||||||||||||||::|||||| |||||||||||||||||||||||| ||||||
Db         61 IQQTFNLFSTKDSSAAWEQSLLEKFSTELYQQLNDLEACVIQEVGVEETPLMNEDSILAV 120

Qy        122 KKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSLSTNLQERLRRKE 167
              :||||||||||||||||||||||||||||| | |||||:|||||:
Db        121 RKYFQRITLYLTEKKYSPCAWEVVRAEIMRSLSFSTNLQKRLRRKD 166


RESULT 6
US-08-769-062B-75
; Sequence 75, Application US/08769062B
; Patent No. 6335160
; GENERAL INFORMATION:
;  APPLICANT: Patten, Phillip
;  APPLICANT:  Stemmer, Willem P.C.
;  TITLE OF INVENTION: METHODS AND COMPOSITIONS FOR POLYPEPTIDE ENGINEERING
;  FILE REFERENCE: 02-020500US
;  CURRENT APPLICATION NUMBER: US/08/769,062B
;  CURRENT FILING DATE:  1996-12-18
;  PRIOR APPLICATION NUMBER: 08/198,431
;  PRIOR FILING DATE: 1994-02-17
;  PRIOR APPLICATION NUMBER: 08/425,684
;  PRIOR FILING DATE: 1995-04-18
;  PRIOR APPLICATION NUMBER: 08/537,874
;  PRIOR FILING DATE: 1995-10-30
;  NUMBER OF SEQ ID NOS: 101
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 75
;   LENGTH: 166
;   TYPE: PRT
;   ORGANISM: consensus alpha interferon
US-08-769-062B-75

  Query Match            93.7%;  Score 807;  DB 2;  Length 166;
  Best Local Similarity  94.0%;  Pred. No. 1.5e-84;
  Matches  156;  Conservative    5;  Mismatches    5;  Indels    0;  Gaps    0;

Qy          2 CDLPQTHSLGNRRALILLAQMRRISPFSCLKDRHDFGFPQEEFDGNQFQKAQAISVLHEM 61
              |||||||||||||||||||| |||||||||||||||||||||||||||||||||||||||
Db          1 CDLPQTHSLGNRRALILLAQMGRISPFSCLKDRHDFGFPQEEFDGNQFQKAQAISVLHEM 60

Qy         62 IQQTFNLFSTKDSSAAWDESLLEKFYTELYQQLNDLEACVIQEVGVEETPLMNVDSILAV 121
              ||||||||||||||::|||||| |||||||||||||||||||||||| ||||||
Db         61 IQQTFNLFSTKDSSAAWEQSLLEKFSTELYQQLNDLEACVIQEVGVEETPLMNEDSILAV 120

Qy        122 KKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSLSTNLQERLRRKE 167
              :||||||||||||||||||||||||||||| | |||||:|||||:
Db        121 RKYFQRITLYLTEKKYSPCAWEVVRAEIMRSLSFSTNLQKRLRRKD 166


RESULT 7
US-09-344-002B-75
; Sequence 75, Application US/09344002B
; Patent No. 6355484
; GENERAL INFORMATION:
;  APPLICANT: Patten, Phillip
;  APPLICANT:  Stemmer, Willem P.C.
;  TITLE OF INVENTION: METHODS AND COMPOSITIONS FOR POLYPEPTIDE ENGINEERING
;  FILE REFERENCE: 02-020502US
;  CURRENT APPLICATION NUMBER: US/09/344,002B
;  CURRENT FILING DATE:  1999-06-24
;  PRIOR APPLICATION NUMBER: 08/769,062
;  PRIOR FILING DATE: 1996-12-18
;  PRIOR APPLICATION NUMBER: 08/198,431
;  PRIOR FILING DATE: 1994-02-17
;  PRIOR APPLICATION NUMBER: 08/425,684
;  PRIOR FILING DATE: 1995-04-18
;  PRIOR APPLICATION NUMBER: 08/537,874
;  PRIOR FILING DATE: 1995-10-30
;  NUMBER OF SEQ ID NOS: 101
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 75
;   LENGTH: 166
;   TYPE: PRT
;   ORGANISM: consensus alpha interferon
US-09-344-002B-75

  Query Match            93.7%;  Score 807;  DB 2;  Length 166;
  Best Local Similarity  94.0%;  Pred. No. 1.5e-84;
  Matches  156;  Conservative    5;  Mismatches    5;  Indels    0;  Gaps    0;

Qy          2 CDLPQTHSLGNRRALILLAQMRRISPFSCLKDRHDFGFPQEEFDGNQFQKAQAISVLHEM 61
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                  |||||||||||||||||||| ||||||||||||||||||||||||||||||||||||||||
Db          1 CDLPQTHSLGNRRALILLAQMGRISPFSCLKDRHDFGFPQEEFDGNQFQKAQAISVLHEM 60

Qy         62 IQQTFNLFSTKDSSAAWDESLLEKFYTELYQQLNDLEACVIQEVGVEETPLMNVDSILAV 121
                  ||||||||||||||||::|||||| |||||||||||||||||||||||||||||| ||||||
Db         61 IQQTFNLFSTKDSSAAWEQSLLEKFSTELYQQLNDLEACVIQEVGVEETPLMNEDSILAV 120

Qy        122 KKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSLSTNLQERLRRKE 167
                 :||||||||||||||||||||||||||||| | |||||:|||||:
Db        121 RKYFQRITLYLTEKKYSPCAWEVVRAEIMRSLSFSTNLQKRLRRKD 166


RESULT 8
US-09-559-565C-75
; Sequence 75, Application US/09559565C
; Patent No. 6455253
; GENERAL INFORMATION:
;  APPLICANT: Patten, Phillip
;  APPLICANT:  Stemmer, Willem P.C.
;  TITLE OF INVENTION: METHODS AND COMPOSITIONS FOR POLYPEPTIDE ENGINEERING
;  FILE REFERENCE: 02-020506US
;  CURRENT APPLICATION NUMBER: US/09/559,565C
;  CURRENT FILING DATE:  2000-04-27
;  NUMBER OF SEQ ID NOS: 101
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 75
;   LENGTH: 166
;   TYPE: PRT
;   ORGANISM: consensus alpha interferon
US-09-559-565C-75

  Query Match             93.7%;  Score 807;  DB 2;  Length 166;
  Best Local Similarity   94.0%;  Pred. No. 1.5e-84;
  Matches  156;  Conservative    5;  Mismatches    5;  Indels    0;  Gaps    0;

Qy          2 CDLPQTHSLGNRRALILLAQMRRISPFSCLKDRHDFGFPQEEFDGNQFQKAQAISVLHEM 61
                  ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 CDLPQTHSLGNRRALILLAQMGRISPFSCLKDRHDFGFPQEEFDGNQFQKAQAISVLHEM 60

Qy         62 IQQTFNLFSTKDSSAAWDESLLEKFYTELYQQLNDLEACVIQEVGVEETPLMNVDSILAV 121
                  ||||||||||||||||::|||||| |||||||||||||||||||||||||||||| ||||||
Db         61 IQQTFNLFSTKDSSAAWEQSLLEKFSTELYQQLNDLEACVIQEVGVEETPLMNEDSILAV 120

Qy        122 KKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSLSTNLQERLRRKE 167
                 :||||||||||||||||||||||||||||| | |||||:|||||:
Db        121 RKYFQRITLYLTEKKYSPCAWEVVRAEIMRSLSFSTNLQKRLRRKD 166


RESULT 9
US-09-693-350-75
; Sequence 75, Application US/09693350
; Patent No. 6579678
; GENERAL INFORMATION:
;  APPLICANT: Patten, Phillip
;  APPLICANT:  Stemmer, Willem P.C.
;  TITLE OF INVENTION: METHODS AND COMPOSITIONS FOR POLYPEPTIDE ENGINEERING
;  FILE REFERENCE: 02-020508US
;  CURRENT APPLICATION NUMBER: US/09/693,350
;  CURRENT FILING DATE:  2000-10-20
;  PRIOR APPLICATION NUMBER: 08/769,062
;  PRIOR FILING DATE: 1996-12-18
;  NUMBER OF SEQ ID NOS: 101
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 75
;   LENGTH: 166
;   TYPE: PRT
;   ORGANISM: consensus alpha interferon
US-09-693-350-75

  Query Match             93.7%;  Score 807;  DB 2;  Length 166;
  Best Local Similarity   94.0%;  Pred. No. 1.5e-84;
  Matches  156;  Conservative    5;  Mismatches    5;  Indels    0;  Gaps    0;

Qy          2 CDLPQTHSLGNRRALILLAQMRRISPFSCLKDRHDFGFPQEEFDGNQFQKAQAISVLHEM 61
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Db          1 CDLPQTHSLGNRRALILLAQMGRISPFSCLKDRHDFGFPQEEFDGNQFQKAQAISVLHEM 60

Qy         62 IQQTFNLFSTKDSSAAWDESLLEKFYTELYQQLNDLEACVIQEVGVEETPLMNVDSILAV 121
                  ||||||||||||||||::|||||| |||||||||||||||||||||||||||||| ||||||
Db         61 IQQTFNLFSTKDSSAAWEQSLLEKFSTELYQQLNDLEACVIQEVGVEETPLMNEDSILAV 120

Qy        122 KKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSLSTNLQERLRRKE 167
                 :||||||||||||||||||||||||||||| | |||||:|||||:
Db        121 RKYFQRITLYLTEKKYSPCAWEVVRAEIMRSLSFSTNLQKRLRRKD 166


RESULT 10
US-09-693-389-75
; Sequence 75, Application US/09693389
; Patent No. 6586182
; GENERAL INFORMATION:
;  APPLICANT: Patten, Phillip
;  APPLICANT:  Stemmer, Willem P.C.
;  TITLE OF INVENTION: METHODS AND COMPOSITIONS FOR POLYPEPTIDE ENGINEERING
;  FILE REFERENCE: 02-020509US
;  CURRENT APPLICATION NUMBER: US/09/693,389
;  CURRENT FILING DATE:  2000-10-20
;  PRIOR APPLICATION NUMBER: 08/769,062
;  PRIOR FILING DATE: 1996-12-18
;  NUMBER OF SEQ ID NOS: 101
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 75
;   LENGTH: 166
;   TYPE: PRT
;   ORGANISM: consensus alpha interferon
US-09-693-389-75

  Query Match             93.7%;  Score 807;  DB 2;  Length 166;
  Best Local Similarity   94.0%;  Pred. No. 1.5e-84;
  Matches  156;  Conservative    5;  Mismatches    5;  Indels    0;  Gaps    0;

Qy          2 CDLPQTHSLGNRRALILLAQMRRISPFSCLKDRHDFGFPQEEFDGNQFQKAQAISVLHEM 61
                  ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 CDLPQTHSLGNRRALILLAQMGRISPFSCLKDRHDFGFPQEEFDGNQFQKAQAISVLHEM 60

Qy         62 IQQTFNLFSTKDSSAAWDESLLEKFYTELYQQLNDLEACVIQEVGVEETPLMNVDSILAV 121
                  ||||||||||||||||::|||||| |||||||||||||||||||||||||||||| ||||||
Db         61 IQQTFNLFSTKDSSAAWEQSLLEKFSTELYQQLNDLEACVIQEVGVEETPLMNEDSILAV 120

Qy        122 KKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSLSTNLQERLRRKE 167
                 :||||||||||||||||||||||||||||| | |||||:|||||:
Db        121 RKYFQRITLYLTEKKYSPCAWEVVRAEIMRSLSFSTNLQKRLRRKD 166


RESULT 11
US-09-559-671A-75
; Sequence 75, Application US/09559671A
; Patent No. 6613514
; GENERAL INFORMATION:
;  APPLICANT: Patten, Phillip
;  APPLICANT:  Stemmer, Willem P.C.
;  TITLE OF INVENTION: METHODS AND COMPOSITIONS FOR POLYPEPTIDE ENGINEERING
;  FILE REFERENCE: 02-020503US
;  CURRENT APPLICATION NUMBER: US/09/559,671A
;  CURRENT FILING DATE:  2001-05-25
;  PRIOR APPLICATION NUMBER: 08/769,062
;  PRIOR FILING DATE: 1996-12-18
;  PRIOR APPLICATION NUMBER: 08/198,431
;  PRIOR FILING DATE: 1994-02-17
;  PRIOR APPLICATION NUMBER: 08/425,684
;  PRIOR FILING DATE: 1995-04-18
;  PRIOR APPLICATION NUMBER: 08/537,874
;  PRIOR FILING DATE: 1995-10-30
;  NUMBER OF SEQ ID NOS: 101
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 75
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;   LENGTH: 166
;   TYPE: PRT
;   ORGANISM: consensus alpha interferon
US-09-559-671A-75

  Query Match             93.7%;  Score 807;  DB 2;  Length 166;
  Best Local Similarity   94.0%;  Pred. No. 1.5e-84;
  Matches  156;  Conservative    5;  Mismatches    5;  Indels    0;  Gaps    0;

Qy          2 CDLPQTHSLGNRRALILLAQMRRISPFSCLKDRHDFGFPQEEFDGNQFQKAQAISVLHEM 61
              |||||||||||||||||||| |||||||||||||||||||||||||||||||||||||||
Db          1 CDLPQTHSLGNRRALILLAQMGRISPFSCLKDRHDFGFPQEEFDGNQFQKAQAISVLHEM 60

Qy         62 IQQTFNLFSTKDSSAAWDESLLEKFYTELYQQLNDLEACVIQEVGVEETPLMNVDSILAV 121
              ||||||||||||||::|||||| ||||||||||||||||||||||||||| ||||||
Db         61 IQQTFNLFSTKDSSAAWEQSLLEKFSTELYQQLNDLEACVIQEVGVEETPLMNEDSILAV 120

Qy        122 KKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSLSTNLQERLRRKE 167
              :||||||||||||||||||||||||||| | |||||:|||||:
Db        121 RKYFQRITLYLTEKKYSPCAWEVVRAEIMRSLSFSTNLQKRLRRKD 166


RESULT 12
US-09-339-926A-75
; Sequence 75, Application US/09339926A
; Patent No. 6653072
; GENERAL INFORMATION:
;  APPLICANT: Patten, Phillip
;  APPLICANT:  Stemmer, Willem P.C.
;  TITLE OF INVENTION: METHODS AND COMPOSITIONS FOR POLYPEPTIDE ENGINEERING
;  FILE REFERENCE: 02-020501US
;  CURRENT APPLICATION NUMBER: US/09/339,926A
;  CURRENT FILING DATE:  1999-06-24
;  PRIOR APPLICATION NUMBER: 08/769,062
;  PRIOR FILING DATE: 1996-12-18
;  PRIOR APPLICATION NUMBER: 08/198,431
;  PRIOR FILING DATE: 1994-02-17
;  PRIOR APPLICATION NUMBER: 08/425,684
;  PRIOR FILING DATE: 1995-04-18
;  PRIOR APPLICATION NUMBER: 08/537,874
;  PRIOR FILING DATE: 1995-10-30
;  NUMBER OF SEQ ID NOS: 101
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 75
;   LENGTH: 166
;   TYPE: PRT
;   ORGANISM: consensus alpha interferon
US-09-339-926A-75

  Query Match             93.7%;  Score 807;  DB 2;  Length 166;
  Best Local Similarity   94.0%;  Pred. No. 1.5e-84;
  Matches  156;  Conservative    5;  Mismatches    5;  Indels    0;  Gaps    0;

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Qy         62 IQQTFNLFSTKDSSAAWDESLLEKFYTELYQQLNDLEACVIQEVGVEETPLMNVDSILAV 121
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Db         61 IQQTFNLFSTKDSSAAWEQSLLEKFSTELYQQLNDLEACVIQEVGVEETPLMNEDSILAV 120

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Db        121 RKYFQRITLYLTEKKYSPCAWEVVRAEIMRSLSFSTNLQKRLRRKD 166


RESULT 13
US-09-954-692-75
; Sequence 75, Application US/09954692
; Patent No. 6946296
; GENERAL INFORMATION:
;  APPLICANT: Patten, Phillip
;  APPLICANT:  Stemmer, Willem P.C.
;  TITLE OF INVENTION: METHODS AND COMPOSITIONS FOR POLYPEPTIDE ENGINEERING
;  FILE REFERENCE: 02-020500US
;  CURRENT APPLICATION NUMBER: US/09/954,692
;  CURRENT FILING DATE:  2001-09-12
;  PRIOR APPLICATION NUMBER: US/08/769,062
;  PRIOR FILING DATE: 1996-12-18
;  PRIOR APPLICATION NUMBER: 08/425,684
;  PRIOR FILING DATE: 1995-04-18
;  PRIOR APPLICATION NUMBER: 08/537,874
;  PRIOR FILING DATE: 1995-10-30
;  NUMBER OF SEQ ID NOS: 101
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 75
;   LENGTH: 166
;   TYPE: PRT
;   ORGANISM: consensus alpha interferon
US-09-954-692-75

  Query Match             93.7%;  Score 807;  DB 2;  Length 166;
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  Matches  156;  Conservative    5;  Mismatches    5;  Indels    0;  Gaps    0;

Qy          2 CDLPQTHSLGNRRALILLAQMRRISPFSCLKDRHDFGFPQEEFDGNQFQKAQAISVLHEM 61
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Db          1 CDLPQTHSLGNRRALILLAQMGRISPFSCLKDRHDFGFPQEEFDGNQFQKAQAISVLHEM 60

Qy         62 IQQTFNLFSTKDSSAAWDESLLEKFYTELYQQLNDLEACVIQEVGVEETPLMNVDSILAV 121
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Db         61 IQQTFNLFSTKDSSAAWEQSLLEKFSTELYQQLNDLEACVIQEVGVEETPLMNEDSILAV 120

Qy        122 KKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSLSTNLQERLRRKE 167
              :||||||||||||||||||||||||||| | |||||:|||||:
Db        121 RKYFQRITLYLTEKKYSPCAWEVVRAEIMRSLSFSTNLQKRLRRKD 166


RESULT 14
US-06-256-204C-49
; Sequence 49, Application US/06256204C
; Patent No. 6610830
; GENERAL INFORMATION:
;  APPLICANT: Goeddel, David V.
;  APPLICANT:  Pestka, Sidney
;  TITLE OF INVENTION: MICROBIAL PRODUCTION OF MATURE HUMAN
;  TITLE OF INVENTION:  LEUKOCYTE INTERFERONS
;  FILE REFERENCE: 1803-0025-999
;  CURRENT APPLICATION NUMBER: US/06/256,204C
;  CURRENT FILING DATE:  1981-04-21
;  NUMBER OF SEQ ID NOS: 85
;  SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 49
;   LENGTH: 167
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-06-256-204C-49

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Db        121 VKKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSLSKIFQERLRRKE 167


RESULT 15
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US-09-206-935-11
; Sequence 11, Application US/09206935
; Patent No. 6299877
; GENERAL INFORMATION:
;  APPLICANT: Chen, Jian
;  APPLICANT: Godowski, Paul
;  APPLICANT: Wood, William I.
;  APPLICANT: Zhang, Dong-Xiao
;  TITLE OF INVENTION: NOVEL TYPE I INTERFERONS
;  FILE REFERENCE: 11669.50US05
;  CURRENT APPLICATION NUMBER: US/09/206,935
;  CURRENT FILING DATE: 1998-12-07
;  EARLIER APPLICATION NUMBER: 60/084,045
;  EARLIER FILING DATE: 1998-05-04
;  NUMBER OF SEQ ID NOS: 24
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 11
;   LENGTH: 189
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-206-935-11

  Query Match             93.0%;  Score 801;  DB 2;  Length 189;
  Best Local Similarity   91.0%;  Pred. No. 8.6e-84;
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Qy         62 IQQTFNLFSTKDSSAAWDESLLEKFYTELYQQLNDLEACVIQEVGVEETPLMNVDSILAV 121
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Db         84 IQQTFNLFSTKDSSATWDETLLDKFYTELYQQLNDLEACMMQEVGVEDTPLMNVDSILTV 143

Qy        122 KKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSLSTNLQERLRRKE 167
              :|||||||||||||||||||||||||||||||| |||||||||
Db        144 RKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSLSANLQERLRRKE 189


Search completed: September  1, 2006, 13:28:53
Job time : 50 secs
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GenCore version 5.1.9

OM protein - protein search, using sw model

Run on: September 1, 2006, 13:28:14 ; Search time 175 Seconds
(without alignments)
442.039 Million cell updates/sec

Title: US-10-650-365A-2
Perfect score: 861
Sequence: 1 MCDLPQTHSLGNRRALILLA.....EIMRSFSLSTNLQERLRRKE 167

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 2097797 seqs, 463214858 residues

Total number of hits satisfying chosen parameters: 2097797

Minimum DB seq length: 0
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Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	861	100.0	167	4	US-10-650-365A-2	Sequence 2, Appli
2	861	100.0	167	5	US-10-928-956A-2	Sequence 2, Appli
3	861	100.0	167	5	US-10-928-474A-2	Sequence 2, Appli
4	861	100.0	167	6	US-11-132-722-58	Sequence 58, Appl
5	861	100.0	167	6	US-11-077-813A-2	Sequence 2, Appli
6	861	100.0	167	6	US-11-077-813A-15	Sequence 15, Appl
7	856	99.4	166	5	US-10-714-817-43	Sequence 43, Appl
8	856	99.4	166	6	US-11-046-440-25	Sequence 25, Appl
9	839.5	97.5	165	4	US-10-658-834A-232	Sequence 232, App
10	839.5	97.5	165	6	US-11-176-830-232	Sequence 232, App
11	824	95.7	166	4	US-10-615-723-34	Sequence 34, Appl
12	810	94.1	166	4	US-10-389-674-50	Sequence 50, Appl
13	810	94.1	166	4	US-10-389-674-61	Sequence 61, Appl
14	808	93.8	166	4	US-10-389-674-41	Sequence 41, Appl
15	808	93.8	166	4	US-10-389-674-64	Sequence 64, Appl
16	808	93.8	166	4	US-10-389-674-79	Sequence 79, Appl
17	807	93.7	166	3	US-09-559-671A-75	Sequence 75, Appl
18	807	93.7	166	3	US-09-954-692-75	Sequence 75, Appl
19	807	93.7	166	4	US-10-389-674-40	Sequence 40, Appl
20	807	93.7	166	4	US-10-389-674-43	Sequence 43, Appl
21	807	93.7	166	4	US-10-389-674-46	Sequence 46, Appl
22	807	93.7	166	4	US-10-389-674-83	Sequence 83, Appl
23	807	93.7	166	4	US-10-667-772-75	Sequence 75, Appl
24	807	93.7	166	5	US-10-646-221-75	Sequence 75, Appl
25	807	93.7	166	5	US-10-667-868-75	Sequence 75, Appl
26	807	93.7	166	6	US-11-198-765-75	Sequence 75, Appl
27	805	93.5	166	4	US-10-389-674-63	Sequence 63, Appl
28	804	93.4	166	4	US-10-389-674-38	Sequence 38, Appl
29	804	93.4	166	4	US-10-389-674-44	Sequence 44, Appl
30	804	93.4	166	4	US-10-389-674-84	Sequence 84, Appl
31	804	93.4	166	4	US-10-389-674-85	Sequence 85, Appl
32	803	93.3	166	4	US-10-389-674-62	Sequence 62, Appl
33	802	93.1	166	4	US-10-389-674-45	Sequence 45, Appl
34	802	93.1	166	4	US-10-389-674-51	Sequence 51, Appl
35	801	93.0	166	3	US-09-977-034-11	Sequence 11, Appl
36	801	93.0	166	3	US-09-977-034-19	Sequence 19, Appl
37	801	93.0	166	4	US-10-389-674-69	Sequence 69, Appl
38	801	93.0	166	4	US-10-389-674-70	Sequence 70, Appl
39	801	93.0	166	4	US-10-658-834A-187	Sequence 187, App
40	801	93.0	166	4	US-10-658-834A-194	Sequence 194, App
41	801	93.0	166	5	US-10-714-817-34	Sequence 34, Appl
42	801	93.0	166	5	US-10-714-817-42	Sequence 42, Appl
43	801	93.0	166	5	US-10-953-259-11	Sequence 11, Appl
44	801	93.0	166	5	US-10-953-259-19	Sequence 19, Appl
45	801	93.0	166	5	US-10-820-467-35	Sequence 35, Appl

ALIGNMENTS

RESULT 1
US-10-650-365A-2
; Sequence 2, Application US/10650365A
; Publication No. US20040202641A1
; GENERAL INFORMATION:
; APPLICANT: Wei, Guangwen
; APPLICANT: Guo, Rongbing
; APPLICANT: Zhang, Renhuai
; TITLE OF INVENTION: Recombinant Super-Compound Interferon
; FILE REFERENCE: 792-A-PCT-US
; CURRENT APPLICATION NUMBER: US/10/650,365A
; CURRENT FILING DATE: 2003-08-28
; PRIOR APPLICATION NUMBER: PCT/CN02/00128
; PRIOR FILING DATE: 2002-02-28
; PRIOR APPLICATION NUMBER: CN 01104367.9
; PRIOR FILING DATE: 2001-02-28
; NUMBER OF SEQ ID NOS: 13
; SOFTWARE: PatentIn version 3.2
; SEQ ID NO 2
; LENGTH: 167
; TYPE: PRT
; ORGANISM: human synthesis
US-10-650-365A-2

Query Match 100.0%; Score 861; DB 4; Length 167;
Best Local Similarity 100.0%; Pred. No. 2.6e-81;
Matches 167; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy         61 MIQQTFNLFSTKDSSAAWDESLLEKFYTELYQQLNDLEACVIQEVGVEETPLMNVDSILA 120
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Db         61 MIQQTFNLFSTKDSSAAWDESLLEKFYTELYQQLNDLEACVIQEVGVEETPLMNVDSILA 120

Qy        121 VKKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSLSTNLQERLRRKE 167
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Db        121 VKKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSLSTNLQERLRRKE 167
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RESULT 2
US-10-928-956A-2
; Sequence 2, Application US/10928956A
; Publication No. US20050169885A1
; GENERAL INFORMATION:
; APPLICANT: Wei, Guangwen
; TITLE OF INVENTION: Recombinant Super-Compound Interferon
; FILE REFERENCE: 792-C-US
; CURRENT APPLICATION NUMBER: US/10/928,956A

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;  CURRENT FILING DATE:  2004-08-26
;  PRIOR APPLICATION NUMBER: 60/498,449
;  PRIOR FILING DATE: 2003-08-28
;  PRIOR APPLICATION NUMBER: 280/MUM/2004
;  PRIOR FILING DATE: 2004-03-05
;  PRIOR APPLICATION NUMBER: 279/MUM/2004
;  PRIOR FILING DATE: 2004-03-05
;  NUMBER OF SEQ ID NOS: 13
;  SOFTWARE: PatentIn version 3.3
; SEQ ID NO 2
;   LENGTH: 167
;   TYPE: PRT
;   ORGANISM: Artificial
;   FEATURE:
;   OTHER INFORMATION: Synthetic Construct
US-10-928-956A-2

  Query Match             100.0%;  Score 861;  DB 5;  Length 167;
  Best Local Similarity   100.0%;  Pred. No. 2.6e-81;
  Matches  167;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

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Qy         61 MIQQTFNLFSTKDSSAAWDESLLEKFYTELYQQLNDLEACVIQEVGVEETPLMNVDSILA 120
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Qy        121 VKKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSLSTNLQERLRRKE 167
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Db        121 VKKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSLSTNLQERLRRKE 167


RESULT 3
US-10-928-474A-2
; Sequence 2, Application US/10928474A
; Publication No. US20050208019A1
; GENERAL INFORMATION:
;  APPLICANT: Wei, Guangwen
;  TITLE OF INVENTION: USES OF INTERFERONS WITH ALTERED SPATIAL STRUCTURE
;  FILE REFERENCE: 795-A-US
;  CURRENT APPLICATION NUMBER: US/10/928,474A
;  CURRENT FILING DATE:  2004-08-26
;  PRIOR APPLICATION NUMBER: 60/498,449
;  PRIOR FILING DATE: 2003-08-28
;  PRIOR APPLICATION NUMBER: 60/498,785
;  PRIOR FILING DATE: 2003-08-28
;  PRIOR APPLICATION NUMBER: 60/498,923
;  PRIOR FILING DATE: 2003-08-28
;  PRIOR APPLICATION NUMBER: 280/MUM/2004
;  PRIOR FILING DATE: 2004-03-05
;  PRIOR APPLICATION NUMBER: 279/MUM/2004
;  PRIOR FILING DATE: 2004-03-05
;  NUMBER OF SEQ ID NOS: 13
;  SOFTWARE: PatentIn version 3.3
; SEQ ID NO 2
;   LENGTH: 167
;   TYPE: PRT
;   ORGANISM: Artificial
;   FEATURE:
;   OTHER INFORMATION: Synthetic Construct
US-10-928-474A-2

  Query Match             100.0%;  Score 861;  DB 5;  Length 167;
  Best Local Similarity   100.0%;  Pred. No. 2.6e-81;
  Matches  167;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 MCDLPQTHSLGNRRALILLAQMRRISPFSCLKDRHDFGFPQEEFDGNQFQKAQAISVLHE 60
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Qy         61 MIQQTFNLFSTKDSSAAWDESLLEKFYTELYQQLNDLEACVIQEVGVEETPLMNVDSILA 120
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Qy        121 VKKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSLSTNLQERLRRKE 167
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Db        121 VKKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSLSTNLQERLRRKE 167


RESULT 4
US-11-132-722-58
; Sequence 58, Application US/11132722
; Publication No. US20050266465A1
; GENERAL INFORMATION:
;  APPLICANT: Patten, Phillip A., et al.
;  TITLE OF INVENTION: INTERFERON-ALPHA POLYPEPTIDES AND
;  TITLE OF INVENTION:  CONJUGATES
;  FILE REFERENCE: 0280.310US
;  CURRENT APPLICATION NUMBER: US/11/132,722
;  CURRENT FILING DATE:  2005-05-18
;  PRIOR APPLICATION NUMBER: US 60/572,504
;  PRIOR FILING DATE: 2004-05-19
;  NUMBER OF SEQ ID NOS: 90
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 58
;   LENGTH: 167
;   TYPE: PRT
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Synthetic Construct IFN-alpha Con1
US-11-132-722-58

  Query Match             100.0%;  Score 861;  DB 6;  Length 167;
  Best Local Similarity   100.0%;  Pred. No. 2.6e-81;
  Matches  167;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 MCDLPQTHSLGNRRALILLAQMRRISPFSCLKDRHDFGFPQEEFDGNQFQKAQAISVLHE 60
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Db          1 MCDLPQTHSLGNRRALILLAQMRRISPFSCLKDRHDFGFPQEEFDGNQFQKAQAISVLHE 60

Qy         61 MIQQTFNLFSTKDSSAAWDESLLEKFYTELYQQLNDLEACVIQEVGVEETPLMNVDSILA 120
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RESULT 5
US-11-077-813A-2
; Sequence 2, Application US/11077813A
; Publication No. US20060035327A1
; GENERAL INFORMATION:
;  APPLICANT: Wei, Guangwen
;  APPLICANT:  Wei, Guangwen
;  TITLE OF INVENTION: RECOMBINANT SUPER-COMPOUND INTERFERON AND USES THEREOF
;  FILE REFERENCE: 1005-A-US
;  CURRENT APPLICATION NUMBER: US/11/077,813A
;  CURRENT FILING DATE:  2005-03-10
;  PRIOR APPLICATION NUMBER: PCT/CN02/00128
;  PRIOR FILING DATE: 2002-02-28
;  PRIOR APPLICATION NUMBER: 60/659925
;  PRIOR FILING DATE: 2005-03-09
;  PRIOR APPLICATION NUMBER: 10/927,975
;  PRIOR FILING DATE: 2004-08-26
;  PRIOR APPLICATION NUMBER: 60/498,449
;  PRIOR FILING DATE: 2003-08-28
;  PRIOR APPLICATION NUMBER: 60/498,785
;  PRIOR FILING DATE: 2003-08-28
;  PRIOR APPLICATION NUMBER: 60/498,923
;  PRIOR FILING DATE: 2003-08-28
;  PRIOR APPLICATION NUMBER: 10/650,365
;  PRIOR FILING DATE: 2003-08-28
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;  PRIOR APPLICATION NUMBER: CN 01104367.9
;  PRIOR FILING DATE: 2001-02-28
;  PRIOR APPLICATION NUMBER: 279/MUM/2004
;  PRIOR FILING DATE: 2004-03-05
;  PRIOR APPLICATION NUMBER: 280/MUM/2004
;  PRIOR FILING DATE: 2004-03-05
;  Remaining Prior Application data removed - See File Wrapper or PALM.
;  NUMBER OF SEQ ID NOS: 16
;  SOFTWARE: PatentIn version 3.2
; SEQ ID NO 2
;   LENGTH: 167
;   TYPE: PRT
;   ORGANISM: human synthesis
US-11-077-813A-2

  Query Match           100.0%;  Score 861;  DB 6;  Length 167;
  Best Local Similarity  100.0%;  Pred. No. 2.6e-81;
  Matches  167;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

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Db          1 MCDLPQTHSLGNRRALILLAQMRRISPFSCLKDRHDFGFPQEEFDGNQFQKAQAISVLHE 60

Qy         61 MIQQTFNLFSTKDSSAAWDESLLEKFYTELYQQLNDLEACVIQEVGVEETPLMNVDSILA 120
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Db         61 MIQQTFNLFSTKDSSAAWDESLLEKFYTELYQQLNDLEACVIQEVGVEETPLMNVDSILA 120

Qy        121 VKKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSLSTNLQERLRRKE 167
              |||||||||||||||||||||||||||||||||||||||||||||||
Db        121 VKKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSLSTNLQERLRRKE 167


RESULT 6
US-11-077-813A-15
; Sequence 15, Application US/11077813A
; Publication No. US20060035327A1
; GENERAL INFORMATION:
;  APPLICANT: Wei, Guangwen
;  APPLICANT:  Wei, Guangwen
;  TITLE OF INVENTION: RECOMBINANT SUPER-COMPOUND INTERFERON AND USES THEREOF
;  FILE REFERENCE: 1005-A-US
;  CURRENT APPLICATION NUMBER: US/11/077,813A
;  CURRENT FILING DATE:  2005-03-10
;  PRIOR APPLICATION NUMBER: PCT/CN02/00128
;  PRIOR FILING DATE: 2002-02-28
;  PRIOR APPLICATION NUMBER: 60/659925
;  PRIOR FILING DATE: 2005-03-09
;  PRIOR APPLICATION NUMBER: 10/927,975
;  PRIOR FILING DATE: 2004-08-26
;  PRIOR APPLICATION NUMBER: 60/498,449
;  PRIOR FILING DATE: 2003-08-28
;  PRIOR APPLICATION NUMBER: 60/498,785
;  PRIOR FILING DATE: 2003-08-28
;  PRIOR APPLICATION NUMBER: 60/498,923
;  PRIOR FILING DATE: 2003-08-28
;  PRIOR APPLICATION NUMBER: 10/650,365
;  PRIOR FILING DATE: 2003-08-28
;  PRIOR APPLICATION NUMBER: CN 01104367.9
;  PRIOR FILING DATE: 2001-02-28
;  PRIOR APPLICATION NUMBER: 279/MUM/2004
;  PRIOR FILING DATE: 2004-03-05
;  PRIOR APPLICATION NUMBER: 280/MUM/2004
;  PRIOR FILING DATE: 2004-03-05
;  Remaining Prior Application data removed - See File Wrapper or PALM.
;  NUMBER OF SEQ ID NOS: 16
;  SOFTWARE: PatentIn version 3.2
; SEQ ID NO 15
;   LENGTH: 167
;   TYPE: PRT
;   ORGANISM: human synthesis
US-11-077-813A-15

  Query Match           100.0%;  Score 861;  DB 6;  Length 167;
  Best Local Similarity  100.0%;  Pred. No. 2.6e-81;
  Matches  167;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 MCDLPQTHSLGNRRALILLAQMRRISPFSCLKDRHDFGFPQEEFDGNQFQKAQAISVLHE 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 MCDLPQTHSLGNRRALILLAQMRRISPFSCLKDRHDFGFPQEEFDGNQFQKAQAISVLHE 60

Qy         61 MIQQTFNLFSTKDSSAAWDESLLEKFYTELYQQLNDLEACVIQEVGVEETPLMNVDSILA 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 MIQQTFNLFSTKDSSAAWDESLLEKFYTELYQQLNDLEACVIQEVGVEETPLMNVDSILA 120

Qy        121 VKKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSLSTNLQERLRRKE 167
              |||||||||||||||||||||||||||||||||||||||||||||||
Db        121 VKKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSLSTNLQERLRRKE 167


RESULT 7
US-10-714-817-43
; Sequence 43, Application US/10714817
; Publication No. US20040219131A1
; GENERAL INFORMATION:
;  APPLICANT: Patten, Phillip A. et al.
;  TITLE OF INVENTION: Interferon-Alpha Polypeptides and Conjugates
;  FILE REFERENCE: 0269us310
;  CURRENT APPLICATION NUMBER: US/10/714,817
;  CURRENT FILING DATE:  2003-11-17
;  PRIOR APPLICATION NUMBER: US 60/502,560
;  PRIOR FILING DATE: 2003-09-12
;  PRIOR APPLICATION NUMBER: US 60/427,612
;  PRIOR FILING DATE: 2002-11-18
;  NUMBER OF SEQ ID NOS: 104
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 43
;   LENGTH: 166
;   TYPE: PRT
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: IFNalpha-Con1
US-10-714-817-43

  Query Match           99.4%;  Score 856;  DB 5;  Length 166;
  Best Local Similarity  100.0%;  Pred. No. 8.6e-81;
  Matches  166;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          2 CDLPQTHSLGNRRALILLAQMRRISPFSCLKDRHDFGFPQEEFDGNQFQKAQAISVLHEM 61
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 CDLPQTHSLGNRRALILLAQMRRISPFSCLKDRHDFGFPQEEFDGNQFQKAQAISVLHEM 60

Qy         62 IQQTFNLFSTKDSSAAWDESLLEKFYTELYQQLNDLEACVIQEVGVEETPLMNVDSILAV 121
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 IQQTFNLFSTKDSSAAWDESLLEKFYTELYQQLNDLEACVIQEVGVEETPLMNVDSILAV 120

Qy        122 KKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSLSTNLQERLRRKE 167
              |||||||||||||||||||||||||||||||||||||||||||||||
Db        121 KKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSLSTNLQERLRRKE 166


RESULT 8
US-11-046-440-25
; Sequence 25, Application US/11046440
; Publication No. US20050220762A1
; GENERAL INFORMATION:
;  APPLICANT: Cho, Ho S
;  APPLICANT:  Daniel, Thomas
;  APPLICANT:  Hays, Anna-Maria
;  APPLICANT:  Wilson, Troy
;  TITLE OF INVENTION: Modified Human Interferon Polypeptides and Their Uses
;  FILE REFERENCE: AMBX-0030.00US
;  CURRENT APPLICATION NUMBER: US/11/046,440
;  CURRENT FILING DATE:  2005-01-28
;  PRIOR APPLICATION NUMBER: 60/541,528
;  PRIOR FILING DATE: 2004-02-02
;  PRIOR APPLICATION NUMBER: 60/581,314
```

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;  PRIOR FILING DATE: 2004-06-18
;  PRIOR APPLICATION NUMBER: 60/581,175
;  PRIOR FILING DATE: 2004-06-18
;  PRIOR APPLICATION NUMBER: 60/580,885
;  PRIOR FILING DATE: 2004-06-18
;  PRIOR APPLICATION NUMBER: 60/638,616
;  PRIOR FILING DATE: 2004-12-22
;  NUMBER OF SEQ ID NOS: 27
;  SOFTWARE: PatentIn version 3.3
; SEQ ID NO 25
;   LENGTH: 166
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-11-046-440-25

  Query Match             99.4%;  Score 856;  DB 6;  Length 166;
  Best Local Similarity   100.0%;  Pred. No. 8.6e-81;
  Matches  166;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          2 CDLPQTHSLGNRRALILLAQMRRISPFSCLKDRHDFGFPQEEFDGNQFQKAQAISVLHEM 61
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 CDLPQTHSLGNRRALILLAQMRRISPFSCLKDRHDFGFPQEEFDGNQFQKAQAISVLHEM 60

Qy         62 IQQTFNLFSTKDSSAAWDESLLEKFYTELYQQLNDLEACVIQEVGVEETPLMNVDSILAV 121
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 IQQTFNLFSTKDSSAAWDESLLEKFYTELYQQLNDLEACVIQEVGVEETPLMNVDSILAV 120

Qy        122 KKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSLSTNLQERLRRKE 167
              |||||||||||||||||||||||||||||||||||||||||||||
Db        121 KKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSLSTNLQERLRRKE 166


RESULT 9
US-10-658-834A-232
; Sequence 232, Application US/10658834A
; Publication No. US20040132977A1
; GENERAL INFORMATION:
;  APPLICANT: Gantier, Rene
;  APPLICANT:  Guyon, Thierry
;  APPLICANT:  Drittanti, Lila
;  APPLICANT:  Vega, Manuel
;  TITLE OF INVENTION: Rational Evolution of Cytokines for Higher Stability, Encoding Nu
;  TITLE OF INVENTION:  Acid
;  TITLE OF INVENTION:  Molecules and Related Applications
;  FILE REFERENCE: 38751-922
;  CURRENT APPLICATION NUMBER: US/10/658,834A
;  CURRENT FILING DATE:  2003-09-08
;  PRIOR APPLICATION NUMBER: 60/457,135
;  PRIOR FILING DATE: 2003-03-21
;  PRIOR APPLICATION NUMBER: 60/409,898
;  PRIOR FILING DATE: 2002-09-09
;  NUMBER OF SEQ ID NOS: 1306
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 232
;   LENGTH: 165
;   TYPE: PRT
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Interferon alpha consensus sequence
US-10-658-834A-232

  Query Match             97.5%;  Score 839.5;  DB 4;  Length 165;
  Best Local Similarity   99.4%;  Pred. No. 4.5e-79;
  Matches  165;  Conservative    0;  Mismatches    0;  Indels    1;  Gaps    1;

Qy          2 CDLPQTHSLGNRRALILLAQMRRISPFSCLKDRHDFGFPQEEFDGNQFQKAQAISVLHEM 61
              ||||||||||||||||||||||||||||||||||| ||||||||||||||||||||||
Db          1 CDLPQTHSLGNRRALILLAQMRRISPFSCLKDRHDFG-PQEEFDGNQFQKAQAISVLHEM 59

Qy         62 IQQTFNLFSTKDSSAAWDESLLEKFYTELYQQLNDLEACVIQEVGVEETPLMNVDSILAV 121
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         60 IQQTFNLFSTKDSSAAWDESLLEKFYTELYQQLNDLEACVIQEVGVEETPLMNVDSILAV 119

Qy        122 KKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSLSTNLQERLRRKE 167
              |||||||||||||||||||||||||||||||||||||||||||||
Db        120 KKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSLSTNLQERLRRKE 165


RESULT 10
US-11-176-830-232
; Sequence 232, Application US/11176830
; Publication No. US20060020116A1
; GENERAL INFORMATION:
;  APPLICANT: Gantier, Rene
;  APPLICANT:  Guyon, Thierry
;  APPLICANT:  Drittanti, Lila
;  APPLICANT:  Vega, Manuel
;  TITLE OF INVENTION: Rational Evolution of Cytokines for Higher Stability, Encoding Nu
;  TITLE OF INVENTION:  Acid Molecules and Related Applications
;  FILE REFERENCE: 17109-012002 (922B)
;  CURRENT APPLICATION NUMBER: US/11/176,830
;  CURRENT FILING DATE:  2005-07-06
;  PRIOR APPLICATION NUMBER: 10/658,834
;  PRIOR FILING DATE: 2003-09-08
;  PRIOR APPLICATION NUMBER: 60/457,135
;  PRIOR FILING DATE: 2003-03-21
;  PRIOR APPLICATION NUMBER: 60/409,898
;  PRIOR FILING DATE: 2002-09-09
;  NUMBER OF SEQ ID NOS: 1306
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 232
;   LENGTH: 165
;   TYPE: PRT
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Interferon alpha consensus sequence
US-11-176-830-232

  Query Match             97.5%;  Score 839.5;  DB 6;  Length 165;
  Best Local Similarity   99.4%;  Pred. No. 4.5e-79;
  Matches  165;  Conservative    0;  Mismatches    0;  Indels    1;  Gaps    1;

Qy          2 CDLPQTHSLGNRRALILLAQMRRISPFSCLKDRHDFGFPQEEFDGNQFQKAQAISVLHEM 61
              ||||||||||||||||||||||||||||||||||| ||||||||||||||||||||||
Db          1 CDLPQTHSLGNRRALILLAQMRRISPFSCLKDRHDFG-PQEEFDGNQFQKAQAISVLHEM 59

Qy         62 IQQTFNLFSTKDSSAAWDESLLEKFYTELYQQLNDLEACVIQEVGVEETPLMNVDSILAV 121
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         60 IQQTFNLFSTKDSSAAWDESLLEKFYTELYQQLNDLEACVIQEVGVEETPLMNVDSILAV 119

Qy        122 KKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSLSTNLQERLRRKE 167
              |||||||||||||||||||||||||||||||||||||||||||||
Db        120 KKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSLSTNLQERLRRKE 165


RESULT 11
US-10-615-723-34
; Sequence 34, Application US/10615723
; Publication No. US20040018172A1
; GENERAL INFORMATION:
;  APPLICANT: Zoon, et al.
;  TITLE OF INVENTION: Interferon Alpha Hybrids
;  FILE REFERENCE: 4239-56957
;  CURRENT APPLICATION NUMBER: US/10/615,723
;  CURRENT FILING DATE:  2003-07-08
;  PRIOR APPLICATION NUMBER: US/09/744,754C
;  PRIOR FILING DATE: 2001-01-24
;  PRIOR APPLICATION NUMBER: US 60/094,407
;  PRIOR FILING DATE: 1998-07-28
;  PRIOR APPLICATION NUMBER: PCT/US99/15284
;  PRIOR FILING DATE: 1999-07-06
;  NUMBER OF SEQ ID NOS: 42
;  SOFTWARE: PatentIn version 3.2
; SEQ ID NO 34
;   LENGTH: 166
;   TYPE: PRT
```

```
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Gene Fusion
US-10-615-723-34

  Query Match            95.7%;  Score 824;  DB 4;  Length 166;
  Best Local Similarity  96.4%;  Pred. No. 1.8e-77;
  Matches  160;  Conservative    2;  Mismatches    4;  Indels    0;  Gaps    0;

Qy          2 CDLPQTHSLGNRRALILLAQMRRISPFSCLKDRHDFGFPQEEFDGNQFQKAQAISVLHEM 61
              |||||||||||||||||||| ||||||||||||||||||||||||||||||||||||||
Db          1 CDLPQTHSLGNRRALILLAQMGRISPFSCLKDRHDFGFPQEEFDGNQFQKAQAISVLHEM 60

Qy         62 IQQTFNLFSTKDSSAAWDESLLEKFYTELYQQLNDLEACVIQEVGVEETPLMNVDSILAV 121
              ||||||||||||||||||:||:||||||||||||||||||||||||||||||||||||||
Db         61 IQQTFNLFSTKDSSAAWDETLLDKFYTELYQQLNDLEACVIQEVGVEETPLMNVDSILAV 120

Qy        122 KKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSLSTNLQERLRRKE 167
              |||||||||||||||||||||||||||||||||||    ||||||||
Db        121 KKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSLSKIFQERLRRKE 166


RESULT 12
US-10-389-674-50
; Sequence 50, Application US/10389674
; Publication No. US20040002474A1
; GENERAL INFORMATION:
;  APPLICANT: HEINRICHS, VOLKER
;  APPLICANT:  CHEN, TEDDY
;  APPLICANT:  PATTEN, PHILLIP A.
;  TITLE OF INVENTION: IFN-ALPHA HOMOLOGUES
;  FILE REFERENCE: 02-101510/0140.002
;  CURRENT APPLICATION NUMBER: US/10/389,674
;  CURRENT FILING DATE:  2003-03-14
;  PRIOR APPLICATION NUMBER: US/09/685,189
;  PRIOR FILING DATE: 2000-10-06
;  PRIOR APPLICATION NUMBER: 09/415,183
;  PRIOR FILING DATE: 1999-10-07
;  NUMBER OF SEQ ID NOS: 88
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 50
;   LENGTH: 166
;   TYPE: PRT
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Description of Artificial Sequence: Synthetic amino acid
;   FEATURE:
;   OTHER INFORMATION: Clone ID 3CA1
US-10-389-674-50

  Query Match            94.1%;  Score 810;  DB 4;  Length 166;
  Best Local Similarity  94.6%;  Pred. No. 5.3e-76;
  Matches  157;  Conservative    5;  Mismatches    4;  Indels    0;  Gaps    0;

Qy          2 CDLPQTHSLGNRRALILLAQMRRISPFSCLKDRHDFGFPQEEFDGNQFQKAQAISVLHEM 61
              |||||||||||||||||||| ||||||||||||||| ||||||||||||||||||||||
Db          1 CDLPQTHSLGNRRALILLAQMGRISPFSCLKDRHDFGLPQEEFDGNQFQKAQAISVLHEM 60

Qy         62 IQQTFNLFSTKDSSAAWDESLLEKFYTELYQQLNDLEACVIQEVGVEETPLMNVDSILAV 121
              ||||||||||:|||||||:||||| |||||||:||||||||||:|||||||||||||||
Db         61 IQQTFNLFSTKNSSAAWDETLLEKFSTELYQQLNNLEACVIQEVGMEETPLMNVDSILAV 120

Qy        122 KKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSLSTNLQERLRRKE 167
              |||||||||||||||||||||||||||||||| |||||:||||||
Db        121 KKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSFSTNLQKRLRRKE 166


RESULT 13
US-10-389-674-61
; Sequence 61, Application US/10389674
; Publication No. US20040002474A1
; GENERAL INFORMATION:
;  APPLICANT: HEINRICHS, VOLKER
;  APPLICANT:  CHEN, TEDDY
;  APPLICANT:  PATTEN, PHILLIP A.
;  TITLE OF INVENTION: IFN-ALPHA HOMOLOGUES
;  FILE REFERENCE: 02-101510/0140.002
;  CURRENT APPLICATION NUMBER: US/10/389,674
;  CURRENT FILING DATE:  2003-03-14
;  PRIOR APPLICATION NUMBER: US/09/685,189
;  PRIOR FILING DATE: 2000-10-06
;  PRIOR APPLICATION NUMBER: 09/415,183
;  PRIOR FILING DATE: 1999-10-07
;  NUMBER OF SEQ ID NOS: 88
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 61
;   LENGTH: 166
;   TYPE: PRT
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Description of Artificial Sequence: Synthetic amino acid
;   FEATURE:
;   OTHER INFORMATION: Clone ID 2D1
US-10-389-674-61

  Query Match            94.1%;  Score 810;  DB 4;  Length 166;
  Best Local Similarity  94.0%;  Pred. No. 5.3e-76;
  Matches  156;  Conservative    5;  Mismatches    5;  Indels    0;  Gaps    0;

Qy          2 CDLPQTHSLGNRRALILLAQMRRISPFSCLKDRHDFGFPQEEFDGNQFQKAQAISVLHEM 61
              |||||||||||||||||||||||||||||||||||||||||||||||||||||||  |||
Db          1 CDLPQTHSLGNRRALILLAQMRRISPFSCLKDRHDFGFPQEEFDGNQFQKAQAISAFHEM 60

Qy         62 IQQTFNLFSTKDSSAAWDESLLEKFYTELYQQLNDLEACVIQEVGVEETPLMNVDSILAV 121
              ||||||||||||||::|||||| |||||||:||||||||||:|||||| ||||||
Db         61 IQQTFNLFSTKDSSAAWEQSLLEKFSTELYQQLNNLEACVIQEVGMEETPLMNEDSILAV 120

Qy        122 KKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSLSTNLQERLRRKE 167
              |||||||||||||||||||||||||||||||| |||||:||||||
Db        121 KKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSFSTNLQKRLRRKE 166


RESULT 14
US-10-389-674-41
; Sequence 41, Application US/10389674
; Publication No. US20040002474A1
; GENERAL INFORMATION:
;  APPLICANT: HEINRICHS, VOLKER
;  APPLICANT:  CHEN, TEDDY
;  APPLICANT:  PATTEN, PHILLIP A.
;  TITLE OF INVENTION: IFN-ALPHA HOMOLOGUES
;  FILE REFERENCE: 02-101510/0140.002
;  CURRENT APPLICATION NUMBER: US/10/389,674
;  CURRENT FILING DATE:  2003-03-14
;  PRIOR APPLICATION NUMBER: US/09/685,189
;  PRIOR FILING DATE: 2000-10-06
;  PRIOR APPLICATION NUMBER: 09/415,183
;  PRIOR FILING DATE: 1999-10-07
;  NUMBER OF SEQ ID NOS: 88
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 41
;   LENGTH: 166
;   TYPE: PRT
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Description of Artificial Sequence: Synthetic amino acid
;   FEATURE:
;   OTHER INFORMATION: Clone ID 2DB11
US-10-389-674-41

  Query Match            93.8%;  Score 808;  DB 4;  Length 166;
  Best Local Similarity  94.0%;  Pred. No. 8.5e-76;
  Matches  156;  Conservative    6;  Mismatches    4;  Indels    0;  Gaps    0;

Qy          2 CDLPQTHSLGNRRALILLAQMRRISPFSCLKDRHDFGFPQEEFDGNQFQKAQAISVLHEM 61
              |||||||||||||:||||| ||||||||||:||||||||||||||||||||||||||||
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```
Db          1 CDLPQTHSLGNRRALMLLAQMGRISPFSCLKDRYDFGFPQEEFDGNQFQKAQAISVLHEM 60

Qy         62 IQQTFNLFSTKDSSAAWDESLLEKFYTELYQQLNDLEACVIQEVGVEETPLMNVDSILAV 121
              ||||||||||||||||||:||||| |||||||||||||||||||||||||||||||||||
Db         61 IQQTFNLFSTKDSSAAWDETLLEKFSTELYQQLNDLEACVIQEVGVEETPLMNVDSILAV 120

Qy        122 KKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSLSTNLQERLRRKE 167
              :|||||||||| |:||||||||||||||||||| |||||:||||||
Db        121 RKYFQRITLYLIERKYSPCAWEVVRAEIMRSFSFSTNLQKRLRRKE 166


RESULT 15
US-10-389-674-64
; Sequence 64, Application US/10389674
; Publication No. US20040002474A1
; GENERAL INFORMATION:
;  APPLICANT: HEINRICHS, VOLKER
;  APPLICANT:  CHEN, TEDDY
;  APPLICANT:  PATTEN, PHILLIP A.
;  TITLE OF INVENTION: IFN-ALPHA HOMOLOGUES
;  FILE REFERENCE: 02-101510/0140.002
;  CURRENT APPLICATION NUMBER: US/10/389,674
;  CURRENT FILING DATE:  2003-03-14
;  PRIOR APPLICATION NUMBER: US/09/685,189
;  PRIOR FILING DATE: 2000-10-06
;  PRIOR APPLICATION NUMBER: 09/415,183
;  PRIOR FILING DATE: 1999-10-07
;  NUMBER OF SEQ ID NOS: 88
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 64
;   LENGTH: 166
;   TYPE: PRT
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Description of Artificial Sequence: Synthetic amino acid
;   FEATURE:
;   OTHER INFORMATION: Clone ID 2D9
US-10-389-674-64

  Query Match             93.8%;  Score 808;  DB 4;  Length 166;
  Best Local Similarity   94.6%;  Pred. No. 8.5e-76;
  Matches  157;  Conservative    4;  Mismatches    5;  Indels    0;  Gaps    0;

Qy          2 CDLPQTHSLGNRRALILLAQMRRISPFSCLKDRHDFGFPQEEFDGNQFQKAQAISVLHEM 61
              |||||||||||||||||||| ||||||||||||||||||||||||||||||||||||||
Db          1 CDLPQTHSLGNRRALILLAQMGRISPFSCLKDRHDFGFPQEEFDGNQFQKAQAISVLHEM 60

Qy         62 IQQTFNLFSTKDSSAAWDESLLEKFYTELYQQLNDLEACVIQEVGVEETPLMNVDSILAV 121
              |||||||||||||| |::|||||| ||| |||||||||||||||||:||||||||
Db         61 IQQTFNLFSTKDSSATWEQSLLEKFSTELNQQLNDLEACVIQEVGVEETPLVNVDSILAV 120

Qy        122 KKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSLSTNLQERLRRKE 167
              |||||||||||||||||||||||||||||| |||||:||||||
Db        121 KKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSFSTNLQKRLRRKE 166


Search completed: September  1, 2006, 13:31:53
Job time : 176 secs
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November 2005

Published_Applications Nucleic Acid and Published_Applications Amino Acid database searches now generate two sets of results each. The Published_Applications databases have been split into two parts to reduce the amount of time required for their daily updates. This results in more machine time being available for processing searches.

Newly published applications will appear in the Published_Applications_New databases: older published applications make up the Published_Applications_Main databases.

Searches run against Nucleic Acid Published_Applications produce two sets of results, with the extensions **.rnpbm** (Published_Applications_NA_Main) and **.rnpbn** (Published_Applications_NA_New).
Searches run against Amino Acid Published_Applications produce two sets of results, with the extensions **.rapbm** (Published_Applications_AA_Main) and **.rapbn** (Published_Applications_AA_New).

GenCore version 5.1.9

OM protein - protein search, using sw model

Run on: September 1, 2006, 13:29:08 ; Search time 32 Seconds
(without alignments)
359.431 Million cell updates/sec

Title: US-10-650-365A-2
Perfect score: 861
Sequence: 1 MCDLPQTHSLGNRRALILLA.....EIMRSFSLSTNLQERLRRKE 167

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 250042 seqs, 68872936 residues

Total number of hits satisfying chosen parameters: 250042

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : Published_Applications_AA_New:*
1: /EMC_Celerra_SIDS3/ptodata/1/pubpaa/US09_NEW_PUB.pep:*
2: /EMC_Celerra_SIDS3/ptodata/1/pubpaa/US06_NEW_PUB.pep:*
3: /EMC_Celerra_SIDS3/ptodata/1/pubpaa/US07_NEW_PUB.pep:*
4: /EMC_Celerra_SIDS3/ptodata/1/pubpaa/US08_NEW_PUB.pep:*
5: /EMC_Celerra_SIDS3/ptodata/1/pubpaa/PCT_NEW_PUB.pep:*
6: /EMC_Celerra_SIDS3/ptodata/1/pubpaa/US10_NEW_PUB.pep:*
7: /EMC_Celerra_SIDS3/ptodata/1/pubpaa/US11_NEW_PUB.pep:*
8: /EMC_Celerra_SIDS3/ptodata/1/pubpaa/US60_NEW_PUB.pep:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	839.5	97.5	165	7	US-11-330-917-232	Sequence 232, App
2	807	93.7	166	7	US-11-136-115-75	Sequence 75, Appl
3	801	93.0	166	7	US-11-330-917-187	Sequence 187, App
4	801	93.0	166	7	US-11-330-917-194	Sequence 194, App
5	793	92.1	166	7	US-11-136-115-84	Sequence 84, Appl
6	788	91.5	166	7	US-11-136-115-79	Sequence 79, Appl
7	788	91.5	166	7	US-11-330-917-190	Sequence 190, App
8	786	91.3	166	7	US-11-330-917-189	Sequence 189, App
9	780	90.6	166	7	US-11-136-115-76	Sequence 76, Appl
10	777	90.2	166	7	US-11-330-917-191	Sequence 191, App
11	776	90.1	166	7	US-11-330-917-183	Sequence 183, App
12	770	89.4	166	7	US-11-136-115-78	Sequence 78, Appl
13	768	89.2	166	7	US-11-330-917-193	Sequence 193, App
14	767	89.1	166	7	US-11-136-115-77	Sequence 77, Appl
15	767	89.1	166	7	US-11-136-115-85	Sequence 85, Appl
16	754	87.6	166	7	US-11-136-115-81	Sequence 81, Appl
17	754	87.6	166	7	US-11-330-917-192	Sequence 192, App
18	753.5	87.5	165	7	US-11-330-917-111	Sequence 111, App
19	753	87.5	166	7	US-11-136-115-80	Sequence 80, Appl
20	753	87.5	166	7	US-11-330-917-188	Sequence 188, App
21	752.5	87.4	166	6	US-10-933-854-12	Sequence 12, Appl
22	751.5	87.3	165	7	US-11-330-917-13	Sequence 13, Appl
23	751.5	87.3	165	7	US-11-330-917-37	Sequence 37, Appl
24	750.5	87.2	165	7	US-11-330-917-80	Sequence 80, Appl
25	749.5	87.0	165	7	US-11-330-917-21	Sequence 21, Appl
26	749.5	87.0	165	7	US-11-330-917-39	Sequence 39, Appl
27	749.5	87.0	165	7	US-11-330-917-79	Sequence 79, Appl
28	748.5	86.9	165	7	US-11-330-917-46	Sequence 46, Appl
29	748.5	86.9	165	7	US-11-330-917-137	Sequence 137, App
30	748.5	86.9	165	7	US-11-330-917-173	Sequence 173, App
31	747.5	86.8	165	7	US-11-370-555-30	Sequence 30, Appl
32	747.5	86.8	165	7	US-11-330-917-1	Sequence 1, Appli
33	747.5	86.8	165	7	US-11-330-917-100	Sequence 100, App
34	747.5	86.8	165	7	US-11-330-917-110	Sequence 110, App
35	747.5	86.8	165	7	US-11-363-637-30	Sequence 30, Appl
36	747.5	86.8	188	7	US-11-183-218-4	Sequence 4, Appli
37	747.5	86.8	192	6	US-10-568-332-14	Sequence 14, Appl
38	747.5	86.8	196	7	US-11-036-257-83	Sequence 83, Appl
39	747.5	86.8	201	7	US-11-036-257-79	Sequence 79, Appl
40	747.5	86.8	206	7	US-11-036-257-81	Sequence 81, Appl
41	747.5	86.8	209	7	US-11-036-257-65	Sequence 65, Appl
42	747.5	86.8	226	7	US-11-036-257-87	Sequence 87, Appl
43	747.5	86.8	231	7	US-11-036-257-85	Sequence 85, Appl
44	747.5	86.8	539	7	US-11-244-349B-37	Sequence 37, Appl
45	747	86.8	166	7	US-11-136-115-83	Sequence 83, Appl

ALIGNMENTS

RESULT 1
US-11-330-917-232
; Sequence 232, Application US/11330917
; Publication No. US20060182716A1
; GENERAL INFORMATION:
; APPLICANT: Hong, Jin
; APPLICANT: Seiwert, Scott D.
; APPLICANT: Blatt, Lawrence M.
; TITLE OF INVENTION: Synthetic Hyperglycosylated, Protease-Resistant Polypeptide Varia
; TITLE OF INVENTION: Oral Formulations and Methods of Using the Same
; FILE REFERENCE: INTM-060WO
; CURRENT APPLICATION NUMBER: US/11/330,917
; CURRENT FILING DATE: 2006-01-11
; PRIOR APPLICATION NUMBER: 60/600,202
; PRIOR FILING DATE: 2004-08-09
; PRIOR APPLICATION NUMBER: 60/600,134
; PRIOR FILING DATE: 2004-08-09
; PRIOR APPLICATION NUMBER: 60/604,280
; PRIOR FILING DATE: 2004-08-24
; PRIOR APPLICATION NUMBER: 60/604,415
; PRIOR FILING DATE: 2004-08-24
; NUMBER OF SEQ ID NOS: 1354
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 232
; LENGTH: 165
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Interferon alpha consensus sequence
US-11-330-917-232

Query Match 97.5%; Score 839.5; DB 7; Length 165;
Best Local Similarity 99.4%; Pred. No. 1.2e-74;
Matches 165; Conservative 0; Mismatches 0; Indels 1; Gaps 1;

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Qy          2 CDLPQTHSLGNRRALILLAQMRRISPFSCLKDRHDFGFPQEEFDGNQFQKAQAISVLHEM 61
              ||||||||||||||||||||||||||||||||||||| ||||||||||||||||||||||
Db          1 CDLPQTHSLGNRRALILLAQMRRISPFSCLKDRHDFG-PQEEFDGNQFQKAQAISVLHEM 59

Qy         62 IQQTFNLFSTKDSSAAWDESLLEKFYTELYQQLNDLEACVIQEVGVEETPLMNVDSILAV 121
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         60 IQQTFNLFSTKDSSAAWDESLLEKFYTELYQQLNDLEACVIQEVGVEETPLMNVDSILAV 119

Qy        122 KKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSLSTNLQERLRRKE 167
              |||||||||||||||||||||||||||||||||||||||||||||
Db        120 KKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSLSTNLQERLRRKE 165
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RESULT 2
US-11-136-115-75
; Sequence 75, Application US/11136115
; Publication No. US20060166225A1
; GENERAL INFORMATION:
; APPLICANT: Patten, Phillip
; APPLICANT: Stemmer, Willem P.C.
; TITLE OF INVENTION: METHODS AND COMPOSITIONS FOR POLYPEPTIDE ENGINEERING
; FILE REFERENCE: 02-020501US
; CURRENT APPLICATION NUMBER: US/11/136,115
; CURRENT FILING DATE: 2005-05-24
; PRIOR APPLICATION NUMBER: US/09/339,926
; PRIOR FILING DATE: 1999-06-24
; PRIOR APPLICATION NUMBER: 08/769,062
; PRIOR FILING DATE: 1996-12-18
; PRIOR APPLICATION NUMBER: 08/198,431
; PRIOR FILING DATE: 1994-02-17
; PRIOR APPLICATION NUMBER: 08/425,684
; PRIOR FILING DATE: 1995-04-18
; PRIOR APPLICATION NUMBER: 08/537,874
; PRIOR FILING DATE: 1995-10-30
; NUMBER OF SEQ ID NOS: 101
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 75
; LENGTH: 166
; TYPE: PRT
; ORGANISM: consensus alpha interferon
US-11-136-115-75

Query Match 93.7%; Score 807; DB 7; Length 166;
Best Local Similarity 94.0%; Pred. No. 1.8e-71;
Matches 156; Conservative 5; Mismatches 5; Indels 0; Gaps 0;

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Qy          2 CDLPQTHSLGNRRALILLAQMRRISPFSCLKDRHDFGFPQEEFDGNQFQKAQAISVLHEM 61
              |||||||||||||||||||| ||||||||||||||||||||||||||||||||||||||
Db          1 CDLPQTHSLGNRRALILLAQMGRISPFSCLKDRHDFGFPQEEFDGNQFQKAQAISVLHEM 60

Qy         62 IQQTFNLFSTKDSSAAWDESLLEKFYTELYQQLNDLEACVIQEVGVEETPLMNVDSILAV 121
              ||||||||||||||::|||||| |||||||||||||||||||||| |||||| |||||||
Db         61 IQQTFNLFSTKDSSAAWEQSLLEKFSTELYQQLNDLEACVIQEVGVEETPLMNEDSILAV 120

Qy        122 KKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSLSTNLQERLRRKE 167
              :|||||||||||||||||||||||||||| | |||||:|||||:
Db        121 RKYFQRITLYLTEKKYSPCAWEVVRAEIMRSLSFSTNLQKRLRRKD 166
```

RESULT 3
US-11-330-917-187
; Sequence 187, Application US/11330917
; Publication No. US20060182716A1
; GENERAL INFORMATION:
; APPLICANT: Hong, Jin
; APPLICANT: Seiwert, Scott D.
; APPLICANT: Blatt, Lawrence M.
; TITLE OF INVENTION: Synthetic Hyperglycosylated, Protease-Resistant Polypeptide Varia
; TITLE OF INVENTION: Oral Formulations and Methods of Using the Same
; FILE REFERENCE: INTM-060WO
; CURRENT APPLICATION NUMBER: US/11/330,917
; CURRENT FILING DATE: 2006-01-11
; PRIOR APPLICATION NUMBER: 60/600,202
; PRIOR FILING DATE: 2004-08-09
; PRIOR APPLICATION NUMBER: 60/600,134
; PRIOR FILING DATE: 2004-08-09
; PRIOR APPLICATION NUMBER: 60/604,280
; PRIOR FILING DATE: 2004-08-24
; PRIOR APPLICATION NUMBER: 60/604,415
; PRIOR FILING DATE: 2004-08-24
; NUMBER OF SEQ ID NOS: 1354
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 187
; LENGTH: 166
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-330-917-187

Query Match 93.0%; Score 801; DB 7; Length 166;
Best Local Similarity 91.0%; Pred. No. 6.8e-71;
Matches 151; Conservative 9; Mismatches 6; Indels 0; Gaps 0;

```
Qy          2 CDLPQTHSLGNRRALILLAQMRRISPFSCLKDRHDFGFPQEEFDGNQFQKAQAISVLHEM 61
              ||||||||| ||| |:::||| ||||||||||||||||||||||||||||||||||||||
Db          1 CDLPQTHSLSNRRTLMIMAQMGRISPFSCLKDRHDFGFPQEEFDGNQFQKAQAISVLHEM 60

Qy         62 IQQTFNLFSTKDSSAAWDESLLEKFYTELYQQLNDLEACVIQEVGVEETPLMNVDSILAV 121
              |||||||||||||| |||:||:||||||||||||||::||||||:|||||||||| |
Db         61 IQQTFNLFSTKDSSATWDETLLDKFYTELYQQLNDLEACMMQEVGVEDTPLMNVDSILTV 120

Qy        122 KKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSLSTNLQERLRRKE 167
              :|||||||||||||||||||||||||||||||| ||||||||||
Db        121 RKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSLSANLQERLRRKE 166
```

RESULT 4
US-11-330-917-194
; Sequence 194, Application US/11330917
; Publication No. US20060182716A1
; GENERAL INFORMATION:
; APPLICANT: Hong, Jin
; APPLICANT: Seiwert, Scott D.
; APPLICANT: Blatt, Lawrence M.
; TITLE OF INVENTION: Synthetic Hyperglycosylated, Protease-Resistant Polypeptide Varia
; TITLE OF INVENTION: Oral Formulations and Methods of Using the Same
; FILE REFERENCE: INTM-060WO
; CURRENT APPLICATION NUMBER: US/11/330,917
; CURRENT FILING DATE: 2006-01-11
; PRIOR APPLICATION NUMBER: 60/600,202
; PRIOR FILING DATE: 2004-08-09
; PRIOR APPLICATION NUMBER: 60/600,134
; PRIOR FILING DATE: 2004-08-09
; PRIOR APPLICATION NUMBER: 60/604,280
; PRIOR FILING DATE: 2004-08-24
; PRIOR APPLICATION NUMBER: 60/604,415
; PRIOR FILING DATE: 2004-08-24
; NUMBER OF SEQ ID NOS: 1354
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 194
; LENGTH: 166
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-330-917-194

Query Match 93.0%; Score 801; DB 7; Length 166;
Best Local Similarity 94.6%; Pred. No. 6.8e-71;
Matches 157; Conservative 2; Mismatches 7; Indels 0; Gaps 0;

```
Qy          2 CDLPQTHSLGNRRALILLAQMRRISPFSCLKDRHDFGFPQEEFDGNQFQKAQAISVLHEM 61
              |||||||||||||||||||| ||||||||||||||||||||||||||||||||||||||
Db          1 CDLPQTHSLGNRRALILLAQMGRISPFSCLKDRHDFGFPQEEFDGNQFQKAQAISVLHEM 60

Qy         62 IQQTFNLFSTKDSSAAWDESLLEKFYTELYQQLNDLEACVIQEVGVEETPLMNVDSILAV 121
              |||||||||||||| |::|||||| ||| ||||||||||||||||||||||||||||||
Db         61 IQQTFNLFSTKDSSATWEQSLLEKFSTELNQQLNDLEACVIQEVGVEETPLMNVDSILAV 120

Qy        122 KKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSLSTNLQERLRRKE 167
              |||||||||||||||||||||||||||||||||   ||||||||
Db        121 KKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSLSKIFQERLRRKE 166
```

RESULT 5
US-11-136-115-84
; Sequence 84, Application US/11136115
; Publication No. US20060166225A1
; GENERAL INFORMATION:
; APPLICANT: Patten, Phillip
; APPLICANT: Stemmer, Willem P.C.
; TITLE OF INVENTION: METHODS AND COMPOSITIONS FOR POLYPEPTIDE ENGINEERING

```
;  FILE REFERENCE: 02-020501US
;  CURRENT APPLICATION NUMBER: US/11/136,115
;  CURRENT FILING DATE:  2005-05-24
;  PRIOR APPLICATION NUMBER: US/09/339,926
;  PRIOR FILING DATE: 1999-06-24
;  PRIOR APPLICATION NUMBER: 08/769,062
;  PRIOR FILING DATE: 1996-12-18
;  PRIOR APPLICATION NUMBER: 08/198,431
;  PRIOR FILING DATE: 1994-02-17
;  PRIOR APPLICATION NUMBER: 08/425,684
;  PRIOR FILING DATE: 1995-04-18
;  PRIOR APPLICATION NUMBER: 08/537,874
;  PRIOR FILING DATE: 1995-10-30
;  NUMBER OF SEQ ID NOS: 101
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 84
;   LENGTH: 166
;   TYPE: PRT
;   ORGANISM: human alpha interferon
US-11-136-115-84

  Query Match             92.1%;  Score 793;  DB 7;  Length 166;
  Best Local Similarity   93.9%;  Pred. No. 4.1e-70;
  Matches  155;  Conservative    3;  Mismatches    7;  Indels    0;  Gaps    0;

Qy          2 CDLPQTHSLGNRRALILLAQMRRISPFSCLKDRHDFGFPQEEFDGNQFQKAQAISVLHEM 61
              |||||||||||||||||||||| ||||||||||||||||||||||||||||||||||||
Db          1 CDLPQTHSLGNRRALILLAQMGRISPFSCLKDRHDFGFPQEEFDGNQFQKAQAISVLHEM 60

Qy         62 IQQTFNLFSTKDSSAAWDESLLEKFYTELYQQLNDLEACVIQEVGVEETPLMNVDSILAV 121
              |||||||||||||| |::|||||| ||| ||||:|||||||||||||||||||||||||
Db         61 IQQTFNLFSTKDSSAIWEQSLLEKFSTELNQQLNDMEACVIQEVGVEETPLMNVDSILAV 120

Qy        122 KKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSLSTNLQERLRRK 166
              |||||||||||||||||||||||||||||||||||||   |||||||
Db        121 KKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSLSKIFQERLRRK 165


RESULT 6
US-11-136-115-79
; Sequence 79, Application US/11136115
; Publication No. US20060166225A1
; GENERAL INFORMATION:
;  APPLICANT: Patten, Phillip
;  APPLICANT:  Stemmer, Willem P.C.
;  TITLE OF INVENTION: METHODS AND COMPOSITIONS FOR POLYPEPTIDE ENGINEERING
;  FILE REFERENCE: 02-020501US
;  CURRENT APPLICATION NUMBER: US/11/136,115
;  CURRENT FILING DATE:  2005-05-24
;  PRIOR APPLICATION NUMBER: US/09/339,926
;  PRIOR FILING DATE: 1999-06-24
;  PRIOR APPLICATION NUMBER: 08/769,062
;  PRIOR FILING DATE: 1996-12-18
;  PRIOR APPLICATION NUMBER: 08/198,431
;  PRIOR FILING DATE: 1994-02-17
;  PRIOR APPLICATION NUMBER: 08/425,684
;  PRIOR FILING DATE: 1995-04-18
;  PRIOR APPLICATION NUMBER: 08/537,874
;  PRIOR FILING DATE: 1995-10-30
;  NUMBER OF SEQ ID NOS: 101
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 79
;   LENGTH: 166
;   TYPE: PRT
;   ORGANISM: human alpha interferon
US-11-136-115-79

  Query Match             91.5%;  Score 788;  DB 7;  Length 166;
  Best Local Similarity   91.6%;  Pred. No. 1.3e-69;
  Matches  152;  Conservative    8;  Mismatches    6;  Indels    0;  Gaps    0;

Qy          2 CDLPQTHSLGNRRALILLAQMRRISPFSCLKDRHDFGFPQEEFDGNQFQKAQAISVLHEM 61
              |||||||||||||||||||| ||| |||||||||||||:|||||:|||| |||||||||

Db          1 CDLPQTHSLGNRRALILLAQMGRISHFSCLKDRHDFGFPEEEFDGHQFQKTQAISVLHEM 60

Qy         62 IQQTFNLFSTKDSSAAWDESLLEKFYTELYQQLNDLEACVIQEVGVEETPLMNVDSILAV 121
              |||||||||||:||||||::|||||| ||||||||||||||||||||||||||||||||
Db         61 IQQTFNLFSTEDSSAAWEQSLLEKFSTELYQQLNDLEACVIQEVGVEETPLMNVDSILAV 120

Qy        122 KKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSLSTNLQERLRRKE 167
              :|||||||||||||||||||||||||||||| | |||||:|||||:
Db        121 RKYFQRITLYLTEKKYSPCAWEVVRAEIMRSLSFSTNLQKRLRRKD 166


RESULT 7
US-11-330-917-190
; Sequence 190, Application US/11330917
; Publication No. US20060182716A1
; GENERAL INFORMATION:
;  APPLICANT: Hong, Jin
;  APPLICANT:  Seiwert, Scott D.
;  APPLICANT:  Blatt, Lawrence M.
;  TITLE OF INVENTION: Synthetic Hyperglycosylated, Protease-Resistant Polypeptide Vari
;  TITLE OF INVENTION:  Oral Formulations and Methods of Using the Same
;  FILE REFERENCE: INTM-060WO
;  CURRENT APPLICATION NUMBER: US/11/330,917
;  CURRENT FILING DATE:  2006-01-11
;  PRIOR APPLICATION NUMBER: 60/600,202
;  PRIOR FILING DATE: 2004-08-09
;  PRIOR APPLICATION NUMBER: 60/600,134
;  PRIOR FILING DATE: 2004-08-09
;  PRIOR APPLICATION NUMBER: 60/604,280
;  PRIOR FILING DATE: 2004-08-24
;  PRIOR APPLICATION NUMBER: 60/604,415
;  PRIOR FILING DATE: 2004-08-24
;  NUMBER OF SEQ ID NOS: 1354
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 190
;   LENGTH: 166
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-11-330-917-190

  Query Match             91.5%;  Score 788;  DB 7;  Length 166;
  Best Local Similarity   91.6%;  Pred. No. 1.3e-69;
  Matches  152;  Conservative    8;  Mismatches    6;  Indels    0;  Gaps    0;

Qy          2 CDLPQTHSLGNRRALILLAQMRRISPFSCLKDRHDFGFPQEEFDGNQFQKAQAISVLHEM 61
              |||||||||||||||||||| ||| |||||||||||||:|||||:|||| |||||||||
Db          1 CDLPQTHSLGNRRALILLAQMGRISHFSCLKDRHDFGFPEEEFDGHQFQKTQAISVLHEM 60

Qy         62 IQQTFNLFSTKDSSAAWDESLLEKFYTELYQQLNDLEACVIQEVGVEETPLMNVDSILAV 121
              |||||||||||:||||||::|||||| ||||||||||||||||||||||||||||||||
Db         61 IQQTFNLFSTEDSSAAWEQSLLEKFSTELYQQLNDLEACVIQEVGVEETPLMNVDSILAV 120

Qy        122 KKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSLSTNLQERLRRKE 167
              :|||||||||||||||||||||||||||||| | |||||:|||||:
Db        121 RKYFQRITLYLTEKKYSPCAWEVVRAEIMRSLSFSTNLQKRLRRKD 166


RESULT 8
US-11-330-917-189
; Sequence 189, Application US/11330917
; Publication No. US20060182716A1
; GENERAL INFORMATION:
;  APPLICANT: Hong, Jin
;  APPLICANT:  Seiwert, Scott D.
;  APPLICANT:  Blatt, Lawrence M.
;  TITLE OF INVENTION: Synthetic Hyperglycosylated, Protease-Resistant Polypeptide Varia
;  TITLE OF INVENTION:  Oral Formulations and Methods of Using the Same
;  FILE REFERENCE: INTM-060WO
;  CURRENT APPLICATION NUMBER: US/11/330,917
;  CURRENT FILING DATE:  2006-01-11
;  PRIOR APPLICATION NUMBER: 60/600,202
;  PRIOR FILING DATE: 2004-08-09
;  PRIOR APPLICATION NUMBER: 60/600,134
```

```
;  PRIOR FILING DATE: 2004-08-09
;  PRIOR APPLICATION NUMBER: 60/604,280
;  PRIOR FILING DATE: 2004-08-24
;  PRIOR APPLICATION NUMBER: 60/604,415
;  PRIOR FILING DATE: 2004-08-24
;  NUMBER OF SEQ ID NOS: 1354
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 189
;   LENGTH: 166
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-11-330-917-189

  Query Match             91.3%;  Score 786;  DB 7;  Length 166;
  Best Local Similarity   91.6%;  Pred. No. 2e-69;
  Matches  152;  Conservative    8;  Mismatches    6;  Indels    0;  Gaps    0;

Qy          2 CDLPQTHSLGNRRALILLAQMRRISPPSCLKDRHDFGFPQEEFDGNQFQKAQAISVLHEM 61
              |||||||||||||||||||| ||| |||||||||||||:|||||:|||||||||||||||
Db          1 CDLPQTHSLGNRRALILLAQMGRISHFSCLKDRHDFGFPEEEFDGHQFQKAQAISVLHEM 60

Qy         62 IQQTFNLFSTKDSSAAWDESLLEKFYTELYQQLNDLEACVIQEVGVEETPLMNVDSILAV 121
              ||||||||||:||||||::|||||| |||||||||||||||||||||||||||| ||||||
Db         61 IQQTFNLFSTEDSSAAWEQSLLEKFSTELYQQLNDLEACVIQEVGVEETPLMNEDSILAV 120

Qy        122 KKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSLSTNLQERLRRKE 167
              :|||||||||||||||||||||||||||||| | |||||:|||||:
Db        121 RKYFQRITLYLTEKKYSPCAWEVVRAEIMRSLSFSTNLQKRLRRKD 166


RESULT 9
US-11-136-115-76
; Sequence 76, Application US/11136115
; Publication No. US20060166225A1
; GENERAL INFORMATION:
;  APPLICANT: Patten, Phillip
;  APPLICANT:  Stemmer, Willem P.C.
;  TITLE OF INVENTION: METHODS AND COMPOSITIONS FOR POLYPEPTIDE ENGINEERING
;  FILE REFERENCE: 02-020501US
;  CURRENT APPLICATION NUMBER: US/11/136,115
;  CURRENT FILING DATE:  2005-05-24
;  PRIOR APPLICATION NUMBER: US/09/339,926
;  PRIOR FILING DATE: 1999-06-24
;  PRIOR APPLICATION NUMBER: 08/769,062
;  PRIOR FILING DATE: 1996-12-18
;  PRIOR APPLICATION NUMBER: 08/198,431
;  PRIOR FILING DATE: 1994-02-17
;  PRIOR APPLICATION NUMBER: 08/425,684
;  PRIOR FILING DATE: 1995-04-18
;  PRIOR APPLICATION NUMBER: 08/537,874
;  PRIOR FILING DATE: 1995-10-30
;  NUMBER OF SEQ ID NOS: 101
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 76
;   LENGTH: 166
;   TYPE: PRT
;   ORGANISM: human alpha interferon
US-11-136-115-76

  Query Match             90.6%;  Score 780;  DB 7;  Length 166;
  Best Local Similarity   90.4%;  Pred. No. 7.6e-69;
  Matches  150;  Conservative    8;  Mismatches    8;  Indels    0;  Gaps    0;

Qy          2 CDLPQTHSLGNRRALILLAQMRRISPPSCLKDRHDFGFPQEEFDGNQFQKAQAISVLHEM 61
              |||||||||||||||||||| |||||||||||||| |||||||||||| ||| |||||
Db          1 CDLPQTHSLGNRRALILLAQMGRISPPSCLKDRHDFGLPQEEFDGNQFQKTQAIPVLHEM 60

Qy         62 IQQTFNLFSTKDSSAAWDESLLEKFYTELYQQLNDLEACVIQEVGVEETPLMNVDSILAV 121
              ||||||||||:||||||::|||||| |||||||||:||||||||||:||||||| ||||||
Db         61 IQQTFNLFSTEDSSAAWEQSLLEKFSTELYQQLNNLEACVIQEVGMEETPLMNEDSILAV 120

Qy        122 KKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSLSTNLQERLRRKE 167
              :|||||||||||||||||||||||||||||| | |||||:|||||:
Db        121 RKYFQRITLYLTEKKYSPCAWEVVRAEIMRSLSFSTNLQKRLRRKD 166


RESULT 10
US-11-330-917-191
; Sequence 191, Application US/11330917
; Publication No. US20060182716A1
; GENERAL INFORMATION:
;  APPLICANT: Hong, Jin
;  APPLICANT:  Seiwert, Scott D.
;  APPLICANT:  Blatt, Lawrence M.
;  TITLE OF INVENTION: Synthetic Hyperglycosylated, Protease-Resistant Polypeptide Vari
;  TITLE OF INVENTION:  Oral Formulations and Methods of Using the Same
;  FILE REFERENCE: INTM-060WO
;  CURRENT APPLICATION NUMBER: US/11/330,917
;  CURRENT FILING DATE:  2006-01-11
;  PRIOR APPLICATION NUMBER: 60/600,202
;  PRIOR FILING DATE: 2004-08-09
;  PRIOR APPLICATION NUMBER: 60/600,134
;  PRIOR FILING DATE: 2004-08-09
;  PRIOR APPLICATION NUMBER: 60/604,280
;  PRIOR FILING DATE: 2004-08-24
;  PRIOR APPLICATION NUMBER: 60/604,415
;  PRIOR FILING DATE: 2004-08-24
;  NUMBER OF SEQ ID NOS: 1354
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 191
;   LENGTH: 166
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-11-330-917-191

  Query Match             90.2%;  Score 777;  DB 7;  Length 166;
  Best Local Similarity   90.4%;  Pred. No. 1.5e-68;
  Matches  150;  Conservative    8;  Mismatches    8;  Indels    0;  Gaps    0;

Qy          2 CDLPQTHSLGNRRALILLAQMRRISPPSCLKDRHDFGFPQEEFDGNQFQKAQAISVLHEM 61
              |||||||||||||||||||| |||||||||||||| |||||||||||| |||||||||
Db          1 CDLPQTHSLGNRRALILLAQMGRISPPSCLKDRHDFGLPQEEFDGNQFQKTQAISVLHEM 60

Qy         62 IQQTFNLFSTKDSSAAWDESLLEKFYTELYQQLNDLEACVIQEVGVEETPLMNVDSILAV 121
              ||||||||||:||||||::|||||| |||||||||:||||||||||:||||||| ||||||
Db         61 IQQTFNLFSTEDSSAAWEQSLLEKFSTELYQQLNNLEACVIQEVGMEETPLMNEDSILAV 120

Qy        122 KKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSLSTNLQERLRRKE 167
              :|||||||||||||||||||||||||||||| | |||||: ||||:
Db        121 RKYFQRITLYLTEKKYSPCAWEVVRAEIMRSLSFSTNLQKILRRKD 166


RESULT 11
US-11-330-917-183
; Sequence 183, Application US/11330917
; Publication No. US20060182716A1
; GENERAL INFORMATION:
;  APPLICANT: Hong, Jin
;  APPLICANT:  Seiwert, Scott D.
;  APPLICANT:  Blatt, Lawrence M.
;  TITLE OF INVENTION: Synthetic Hyperglycosylated, Protease-Resistant Polypeptide Vari
;  TITLE OF INVENTION:  Oral Formulations and Methods of Using the Same
;  FILE REFERENCE: INTM-060WO
;  CURRENT APPLICATION NUMBER: US/11/330,917
;  CURRENT FILING DATE:  2006-01-11
;  PRIOR APPLICATION NUMBER: 60/600,202
;  PRIOR FILING DATE: 2004-08-09
;  PRIOR APPLICATION NUMBER: 60/600,134
;  PRIOR FILING DATE: 2004-08-09
;  PRIOR APPLICATION NUMBER: 60/604,280
;  PRIOR FILING DATE: 2004-08-24
;  PRIOR APPLICATION NUMBER: 60/604,415
;  PRIOR FILING DATE: 2004-08-24
;  NUMBER OF SEQ ID NOS: 1354
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 183
```

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;   LENGTH: 166
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-11-330-917-183

  Query Match            90.1%;  Score 776;  DB 7;  Length 166;
  Best Local Similarity  90.4%;  Pred. No. 1.9e-68;
  Matches  150;  Conservative    7;  Mismatches    9;  Indels    0;  Gaps    0;

Qy          2 CDLPQTHSLGNRRALILLAQMRRISPFSCLKDRHDFGFPQEEFDGNQFQKAQAISVLHEM 61
              |||||||||||||||||| || ||||||||||||||  |||||||||||||||||||||||
Db          1 CDLPQTHSLGNRRALILLGQMGRISPFSCLKDRHDFRIPQEEFDGNQFQKAQAISVLHEM 60

Qy         62 IQQTFNLFSTKDSSAAWDESLLEKFYTELYQQLNDLEACVIQEVGVEETPLMNVDSILAV 121
              ||||||||||:||||||::|||||| ||||||||||||||||||||||||||| ||||||
Db         61 IQQTFNLFSTEDSSAAWEQSLLEKFSTELYQQLNDLEACVIQEVGVEETPLMNEDSILAV 120

Qy        122 KKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSLSTNLQERLRRKE 167
              :||||||||| |:||||||||||||||| | |||||:|||||:
Db        121 RKYFQRITLYLIERKYSPCAWEVVRAEIMRSLSFSTNLQKRLRRKD 166


RESULT 12
US-11-136-115-78
; Sequence 78, Application US/11136115
; Publication No. US20060166225A1
; GENERAL INFORMATION:
;  APPLICANT: Patten, Phillip
;  APPLICANT:  Stemmer, Willem P.C.
;  TITLE OF INVENTION: METHODS AND COMPOSITIONS FOR POLYPEPTIDE ENGINEERING
;  FILE REFERENCE: 02-020501US
;  CURRENT APPLICATION NUMBER: US/11/136,115
;  CURRENT FILING DATE:  2005-05-24
;  PRIOR APPLICATION NUMBER: US/09/339,926
;  PRIOR FILING DATE: 1999-06-24
;  PRIOR APPLICATION NUMBER: 08/769,062
;  PRIOR FILING DATE: 1996-12-18
;  PRIOR APPLICATION NUMBER: 08/198,431
;  PRIOR FILING DATE: 1994-02-17
;  PRIOR APPLICATION NUMBER: 08/425,684
;  PRIOR FILING DATE: 1995-04-18
;  PRIOR APPLICATION NUMBER: 08/537,874
;  PRIOR FILING DATE: 1995-10-30
;  NUMBER OF SEQ ID NOS: 101
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 78
;   LENGTH: 166
;   TYPE: PRT
;   ORGANISM: human alpha interferon
US-11-136-115-78

  Query Match            89.4%;  Score 770;  DB 7;  Length 166;
  Best Local Similarity  89.2%;  Pred. No. 7.2e-68;
  Matches  148;  Conservative    9;  Mismatches    9;  Indels    0;  Gaps    0;

Qy          2 CDLPQTHSLGNRRALILLAQMRRISPFSCLKDRHDFGFPQEEFDGNQFQKAQAISVLHEM 61
              |:| ||||| ||| |:|||||||||||||||||||| ||||||||||||||||||||||||
Db          1 CNLSQTHSLNNRRTLMLLAQMRRISPFSCLKDRHDFEFPQEEFDGNQFQKAQAISVLHEM 60

Qy         62 IQQTFNLFSTKDSSAAWDESLLEKFYTELYQQLNDLEACVIQEVGVEETPLMNVDSILAV 121
              :||||||||||:|||||||:|||||| ||:||:|||||||||||||||||| ||||||
Db         61 MQQTFNLFSTKNSSAAWDETLLEKFYIELFQQMNDLEACVIQEVGVEETPLMNEDSILAV 120

Qy        122 KKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSLSTNLQERLRRKE 167
              |||||||||| |||||||||||||||| | |||||:|||||:
Db        121 KKYFQRITLYLMEKKYSPCAWEVVRAEIMRSLSFSTNLQKRLRRKD 166


RESULT 13
US-11-330-917-193
; Sequence 193, Application US/11330917
; Publication No. US20060182716A1
; GENERAL INFORMATION:
;  APPLICANT: Hong, Jin
;  APPLICANT:  Seiwert, Scott D.
;  APPLICANT:  Blatt, Lawrence M.
;  TITLE OF INVENTION: Synthetic Hyperglycosylated, Protease-Resistant Polypeptide Varia
;  TITLE OF INVENTION:  Oral Formulations and Methods of Using the Same
;  FILE REFERENCE: INTM-060WO
;  CURRENT APPLICATION NUMBER: US/11/330,917
;  CURRENT FILING DATE:  2006-01-11
;  PRIOR APPLICATION NUMBER: 60/600,202
;  PRIOR FILING DATE: 2004-08-09
;  PRIOR APPLICATION NUMBER: 60/600,134
;  PRIOR FILING DATE: 2004-08-09
;  PRIOR APPLICATION NUMBER: 60/604,280
;  PRIOR FILING DATE: 2004-08-24
;  PRIOR APPLICATION NUMBER: 60/604,415
;  PRIOR FILING DATE: 2004-08-24
;  NUMBER OF SEQ ID NOS: 1354
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 193
;   LENGTH: 166
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-11-330-917-193

  Query Match            89.2%;  Score 768;  DB 7;  Length 166;
  Best Local Similarity  88.6%;  Pred. No. 1.1e-67;
  Matches  147;  Conservative   10;  Mismatches    9;  Indels    0;  Gaps    0;

Qy          2 CDLPQTHSLGNRRALILLAQMRRISPFSCLKDRHDFGFPQEEFDGNQFQKAQAISVLHEM 61
              |:| ||||| ||| |:|:|||||||||||||||||| ||||||||||||||||||||||||
Db          1 CNLSQTHSLNNRRTLMLMAQMRRISPFSCLKDRHDFEFPQEEFDGNQFQKAQAISVLHEM 60

Qy         62 IQQTFNLFSTKDSSAAWDESLLEKFYTELYQQLNDLEACVIQEVGVEETPLMNVDSILAV 121
              :||||||||||:|||||||:|||||| ||:||:|||||||||||||||||| ||||||
Db         61 MQQTFNLFSTKNSSAAWDETLLEKFYIELFQQMNDLEACVIQEVGVEETPLMNEDSILAV 120

Qy        122 KKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSLSTNLQERLRRKE 167
              |||||||||| |||||||||||||||| | |||||:|||||:
Db        121 KKYFQRITLYLMEKKYSPCAWEVVRAEIMRSLSFSTNLQKRLRRKD 166


RESULT 14
US-11-136-115-77
; Sequence 77, Application US/11136115
; Publication No. US20060166225A1
; GENERAL INFORMATION:
;  APPLICANT: Patten, Phillip
;  APPLICANT:  Stemmer, Willem P.C.
;  TITLE OF INVENTION: METHODS AND COMPOSITIONS FOR POLYPEPTIDE ENGINEERING
;  FILE REFERENCE: 02-020501US
;  CURRENT APPLICATION NUMBER: US/11/136,115
;  CURRENT FILING DATE:  2005-05-24
;  PRIOR APPLICATION NUMBER: US/09/339,926
;  PRIOR FILING DATE: 1999-06-24
;  PRIOR APPLICATION NUMBER: 08/769,062
;  PRIOR FILING DATE: 1996-12-18
;  PRIOR APPLICATION NUMBER: 08/198,431
;  PRIOR FILING DATE: 1994-02-17
;  PRIOR APPLICATION NUMBER: 08/425,684
;  PRIOR FILING DATE: 1995-04-18
;  PRIOR APPLICATION NUMBER: 08/537,874
;  PRIOR FILING DATE: 1995-10-30
;  NUMBER OF SEQ ID NOS: 101
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 77
;   LENGTH: 166
;   TYPE: PRT
;   ORGANISM: human alpha interferon
US-11-136-115-77

  Query Match            89.1%;  Score 767;  DB 7;  Length 166;
  Best Local Similarity  89.8%;  Pred. No. 1.4e-67;
  Matches  149;  Conservative    8;  Mismatches    9;  Indels    0;  Gaps    0;
```

```
Qy          2 CDLPQTHSLGNRRALILLAQMRRISPFSCLKDRHDFGFPQEEFDGNQFQKAQAISVLHEM 61
              ||||||||||||||||||||| |||||||||| ||| |||||||||||| |||||||||
Db          1 CDLPQTHSLGNRRALILLAQMGRISPFSCLKDRPDFGLPQEEFDGNQFQKTQAISVLHEM 60

Qy         62 IQQTFNLFSTKDSSAAWDESLLEKFYTELYQQLNDLEACVIQEVGVEETPLMNVDSILAV 121
              ||||||||||:||||||::|||||| |||||||:||||||||||:||||||| ||||||
Db         61 IQQTFNLFSTEDSSAAWEQSLLEKFSTELYQQLNNLEACVIQEVGMEETPLMNEDSILAV 120

Qy        122 KKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSLSTNLQERLRRKE 167
              :|||||||||||||||||||||||||||| | |||||: |||||:
Db        121 RKYFQRITLYLTEKKYSPCAWEVVRAEIMRSLSFSTNLQKILRRKD 166


RESULT 15
US-11-136-115-85
; Sequence 85, Application US/11136115
; Publication No. US20060166225A1
; GENERAL INFORMATION:
;  APPLICANT: Patten, Phillip
;  APPLICANT:  Stemmer, Willem P.C.
;  TITLE OF INVENTION: METHODS AND COMPOSITIONS FOR POLYPEPTIDE ENGINEERING
;  FILE REFERENCE: 02-020501US
;  CURRENT APPLICATION NUMBER: US/11/136,115
;  CURRENT FILING DATE:  2005-05-24
;  PRIOR APPLICATION NUMBER: US/09/339,926
;  PRIOR FILING DATE: 1999-06-24
;  PRIOR APPLICATION NUMBER: 08/769,062
;  PRIOR FILING DATE: 1996-12-18
;  PRIOR APPLICATION NUMBER: 08/198,431
;  PRIOR FILING DATE: 1994-02-17
;  PRIOR APPLICATION NUMBER: 08/425,684
;  PRIOR FILING DATE: 1995-04-18
;  PRIOR APPLICATION NUMBER: 08/537,874
;  PRIOR FILING DATE: 1995-10-30
;  NUMBER OF SEQ ID NOS: 101
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 85
;   LENGTH: 166
;   TYPE: PRT
;   ORGANISM: human alpha interferon
US-11-136-115-85

  Query Match             89.1%;  Score 767;  DB 7;  Length 166;
  Best Local Similarity   89.8%;  Pred. No. 1.4e-67;
  Matches  149;  Conservative    8;  Mismatches    9;  Indels    0;  Gaps    0;

Qy          2 CDLPQTHSLGNRRALILLAQMRRISPFSCLKDRHDFGFPQEEFDGNQFQKAQAISVLHEM 61
              ||||||||||||||||||||| |||||||||| ||| |||||||||||| |||||||||
Db          1 CDLPQTHSLGNRRALILLAQMGRISPFSCLKDRPDFGLPQEEFDGNQFQKTQAISVLHEM 60

Qy         62 IQQTFNLFSTKDSSAAWDESLLEKFYTELYQQLNDLEACVIQEVGVEETPLMNVDSILAV 121
              ||||||||||:||||||::|||||| |||||||:||||||||||:||||||| ||||||
Db         61 IQQTFNLFSTEDSSAAWEQSLLEKFSTELYQQLNNLEACVIQEVGMEETPLMNEDSILAV 120

Qy        122 KKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSLSTNLQERLRRKE 167
              :|||||||||||||||||||||||||||| | |||||: |||||:
Db        121 RKYFQRITLYLTEKKYSPCAWEVVRAEIMRSLSFSTNLQKILRRKD 166


 Search completed: September  1, 2006, 13:32:31
 Job time : 33 secs
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